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CONTATO: MARCOS@ESQUEMASELETRICOS.COM.BR

AV-27D303
AV-27D203

JVC

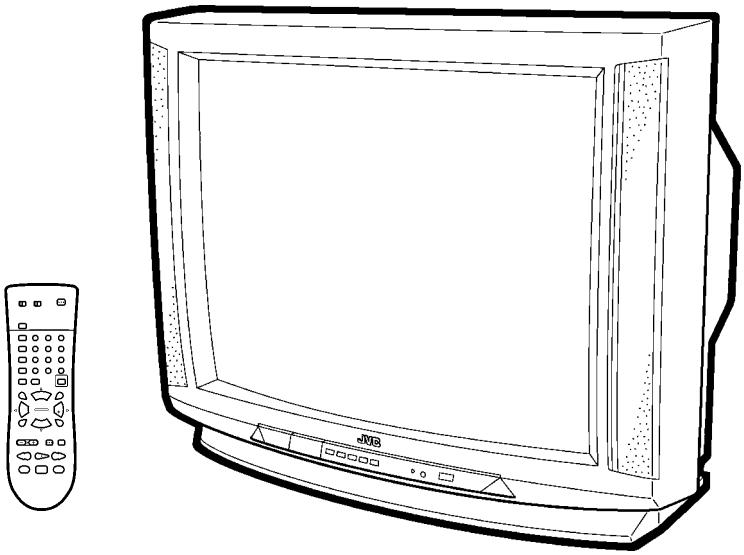
SERVICE MANUAL

COLOR TELEVISION

BASIC CHASSIS
FE

AV-27D303/S
AV-27D303/R
AV-27D203/S
AV-27D203/R

BBE



CONTENTS

No. 51940
May 2002

SPECIFICATIONS

Items	Contents	
	AV-27D303/S AV-27D303/R	**AV-27D203/S AV-27D203/R**
Dimensions (W× H× D)	29-5/8" × 23"-1/4" × 23" (752mm × 590mm × 531mm)	
Mass	70.8 lbs (32.2 kg)	
TV System and Color System		
TV RF System	CCIR(M)	
Color System	NTSC	
Sound System	BTSC System (Multi-Channel Sound)	
TV Receiving Channels and Frequency		
VL Band	(02～06) 54MHz～88MHz	
VH Band	(07～13) 174MHz～216MHz	
UHF Band	(14～69) 470MHz～806MHz	
CATV Receiving Channels and Frequency		
Low Band	(02～06, A-8) by (02～06&01)	
High Band	(07～13) by (07～13)	
Mid Band	(A～1) by (14～22)	(54MHz～804MHz)
Super Band	(J～W) by (23～36)	
Hyper Band	(W+1～W+28) by (37～64)	
Ultra Band	(W+29～W+84) by (65～125)	
Sub Mid Band	(A8, A4～A1) by (01, 96～99)	
TV/CATV Total Channel	181 Channels	
Intermediate Frequency		
Video IF Carrier	45.75MHz	
Sound IF Carrier	41.25MHz (4.5MHz)	
Color Sub Carrier	3.58MHz	
Power Input	120V AC, 60Hz	
Power Consumption	113W	
Picture Tube	27" (68cm) Measured Diagonally	
High Voltage	29kV±1kV (at zero beam current)	
Speaker	2" × 3-1/2" (5 × 9cm) Oval type × 2	
Audio Power Output	1.2W + 1.2W	
Input terminals		
Input 1 S-Video	Y: 1Vp-p Positive (negative sync provided, when terminated with 75Ω)	
	C: 0.286Vp-p (burst signal, when terminated with 75Ω)	
Video(V)	1Vp-p, 75Ω (RCA pin jack)	
Audio(L, R)	500mVrms (-4dBs), High Impedance (RCA pin jack)	
Input 2 Video	1Vp-p, 75Ω (RCA pin jack)	
Component (V/Y, PB, PR)	1Vp-p 75Ω (positive sync)	
Audio(L, R)	500mVrms (-4dBs), High Impedance (RCA pin jack)	
Input 3 Video(V)	1Vp-p, 75Ω (RCA pin jack)	
(Front) Audio(L, R)	500mVrms (-4dBs), High Impedance (RCA pin jack)	
Output terminals		
Variable Audio Output (R/L)	More than 0～1550mVrms (+6dBs)	
	Low impedance (400Hz when modulated 100%) (RCA pin jack)	
Antenna terminal	75Ω (VHF/UHF) Terminal, F-Type Connector	
Remote Control Unit	RM-C252 (AA/R6/UM-3 battery × 2)	

Design & specifications are subject to change without notice.

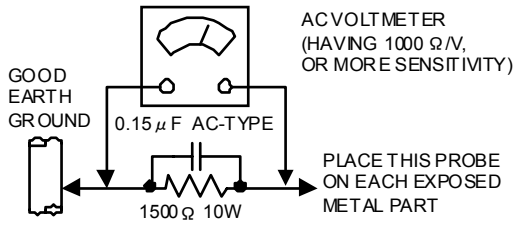
SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
4. **Use isolation transformer when hot chassis.**
   The chassis and any sub-chassis contained in some products are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some products when the HOT chassis is exposed.
5. **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
   Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED(NEUTRAL) : (⏚) side GND and EARTH : (⏚) side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.
   If above note will not be kept, a fuse or any parts will be broken.
6. If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).
7. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
8. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.
9. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.
10. **Isolation Check**
    (Safety for Electrical Shock Hazard)
    After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

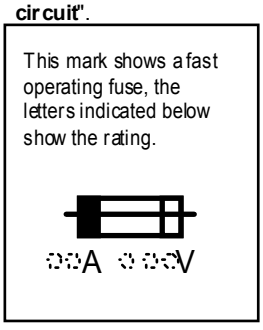
    (1) **Dielectric Strength Test**
    The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 1100V AC (r.m.s.) for a period of one second.
    (. . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
    This method of test requires a test equipment not generally found in the service trade.

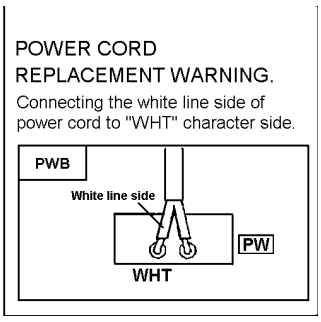
    (2) **Leakage Current Check**
    Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).
    However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

    ● **Alternate Check Method**
    Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).
    However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



11. **High voltage hold down circuit check.**
    After repair of the high voltage hold down circuit, this circuit shall be checked to operate correctly.
    See item "**How to check the high voltage hold down circuit**".





FEATURES

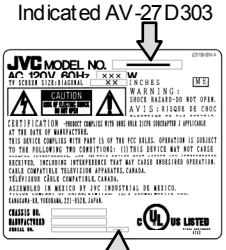
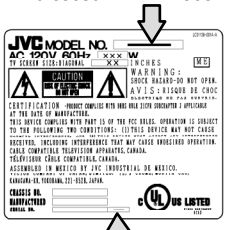
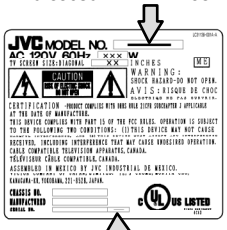
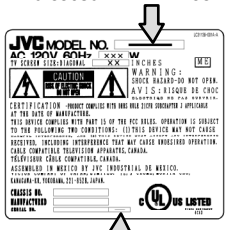
- New chassis design enables use of a single board with simplified circuitry.
- Users can make fun to connect the Digital Video Disk player with the component video signal input terminal.
- Provided with miniature tuner (TV/CATV).
- Multifunctional remote control permits picture adjustment.
- Adoption of the CHANNEL GUARD function prevents the specific channels from being selected, unless the "ID number" is key in.
- I^2C bus control utilizes single chip ICs.
- Adoption of the VIDEO STATUS function.
- Adoption of the ON/OFF TIMER function.
- Built-in V-CHIP system.
- With 75Ω V/U in common (F-Type) ANT Terminal.
- SLEEP TIMER for setting in real time.
- Closed-caption broadcasts can be viewed.
- Built-in MTS system.
- Built-in HYPER-SURROUND system.
- Because built-in the BBE circuit improved the sound of conversation
- S-VIDEO input terminal for taking best advantage of Super VHS.
- Variable Audio output terminal.
- 3 LINE Digital Comb filter Improved picture quality.

MAIN DIFFERENCE LIST

⚠	Model name / Parts Name	AV-27D303/S	AV-27D303/R	AV-27D203/S	AV-27D203/R
	MAIN PWB	SFE-1001A-M2	SFE-1002A-M2	SFE-1001A-M2	SFE-1002A-M2
⚠	ITC TUBE (C)	A68QDN891X001	A68ADT25X01	A68QDN891X001	A68ADT25X01
⚠	FRONT CABI. ASS'Y	GQ10018-001B-A	←	GQ10018-002B-A	←
⚠	DOOR	GQ30024-002A-A	←	GQ30024-001A-A	←
	JVC MARK	CM48006-007-C	←	CM48006-006-C	←
⚠	POWER KNOB	GQ30026-002A-A	←	GQ30026-001A-A	←
⚠	CONTROL KNOB	GQ30025-002A-A	←	GQ30025-001A-A	←

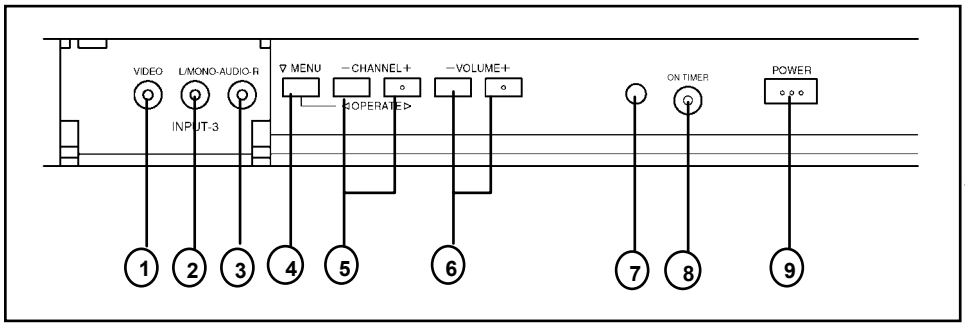
HOW TO IDENTIFY MODELS

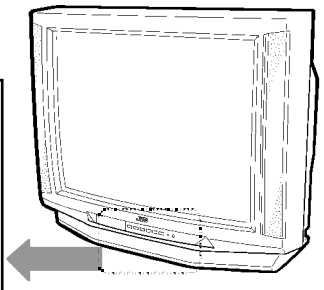
The difference between AV-27D303S and AV-27D303/R is in the PICTURE TUBE.
As the result of the difference in picture tube, the MAIN PWB also differs.
In the same way, the difference between AV-27D203/S and AV-27D203/R is in the PICTURE TUBE too.

⚠	Model / Parts name	AV-27D303/S	AV-27D303/R	AV-27D203/S	AV-27D203/R
⚠	RATING LABEL	GQ30032-001A-A	←	←	←
		Indicated AV-27D303  Indicated "S"	Indicated AV-27D303  Indicated "R"	Indicated AV-27D203  Indicated "S"	Indicated AV-27D203  Indicated "R"

FUNCTIONS

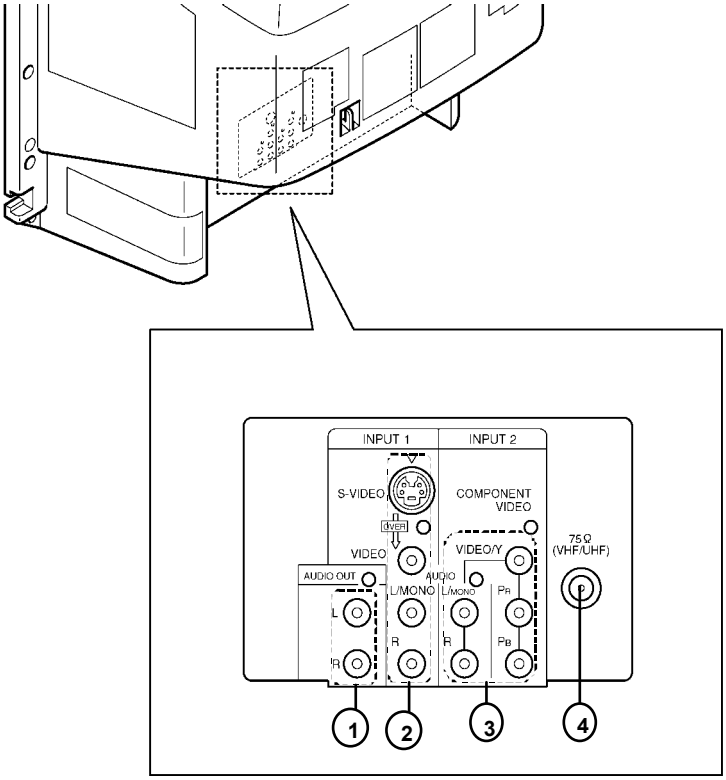
■FRONT PANEL CONTROL





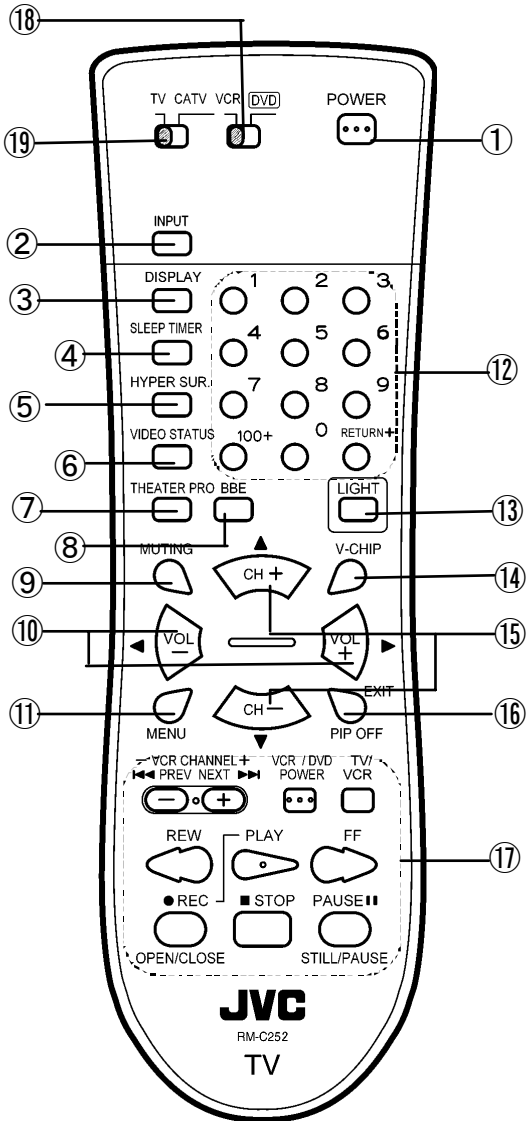
1	INPUT3 VIDEO terminal	6	VOLUME -/+ buttons
2	INPUT3 AUDIO L MONO terminal	7	REMOCON LENS
3	INPUT3 AUDIO R terminal	8	ON TIMER LED
4	MENU button	9	POWER button
5	CHANNEL -/+ buttons OPERATE ◀/▶ buttons		

■REAR TERMINAL



1	AUDIO OUTPUT (L, R)terminals
2	INPUT1 (S, V, L, R) terminals
3	INPUT2 (V/Y, PR, PB, L, R) terminals
4	VHF / UHF terminal

■REMOTE CONTROL UNIT [RM-C252]



①	POWER key
②	INPUT key
③	DISPLAY key
④	SLEEP TIMER key
⑤	HYPER SUR. key
⑥	VIDEO STATUS key
⑦	THEATER PRO key
⑧	BBE key
⑨	MUTING key
⑩	VOL−/+(MENU ◀ /▶) keys
⑪	MENU key
⑫	CHANNEL keys
⑬	LIGHT key
⑭	V-CHIP key
⑮	CH−/+(MENU ▼/▲) keys
⑯	EXIT / PIP OFF key
⑰	VCR CONTROL key
⑱	VCR / DVD switch
⑲	TV / CATV switch

NOTE The CH-/+ keys and VOL-/+ keys operate CHANNE and VOLUME normally.
These keys are also used to navigate MENU system.

SPECIFIC SERVICE INSTRUCTIONS

DISASSEMBLY PROCEDURE

REMOVING THE REAR COVER

1. Disconnect the power plug from wall outlet.
2. As shown in the Fig.1, remove the **11** screws marked Ⓐ .
3. As shown in Fig.1, remove the **4** screws marked Ⓑ .
4. Then remove the REAR COVER toward you.

REMOVING THE MAIN PWB

- After removing the REAR COVER.

1. Pick this side of the MAIN PWB and raise one slightly, take off the PWB stopper marked Ⓒ from the cabinet bottom.
2. Withdraw the chassis backward.
   (If necessary, remove the wire clamp, connectors etc.)

REMOVING THE SPEAKER

- After removing the rear cover.

1. As shown in Fig. 1, removing the screws marked Ⓓ, then remove the speaker.
2. Follow the same steps when removing the other hand speaker.

NOTE : When removing the screws marked Ⓓ of the speaker, remove the lower side screw first, and then remove the upper one.

CHECKING THE PW BOARD

To check the PW Board from back side.

1. Pull out the chassis (refer to REMOVING THE MAIN PWB).
2. Erect the chassis vertically so that you can easily check the back side of the PW Board.

CAUTION

- When erecting the chassis, be careful so that there will be no contacting with other PW Board.
- Before turning on power, make sure that the wire connector is properly connected.
- **When conducting a check with power supplied, be sure to confirm that the CRT EARTH WIRE (BRAIDED ASS'Y) is connected to the CRT SOCKET PW board.**

WIRE CLAMPING AND CABLE TYING

1. Be sure to clamp the wire.
2. Never remove the cable tie used for tying the wires together.
   Should it be inadvertently removed, be sure to tie the wires with a new cable tie.

This exploded view describes about the AV-27D303/R and /S.
Although the AV-27D203/R, /S is slightly different from this figure, you can use the exploded view for disassembling the AV-27D203/R, /S in the same step as for this one.

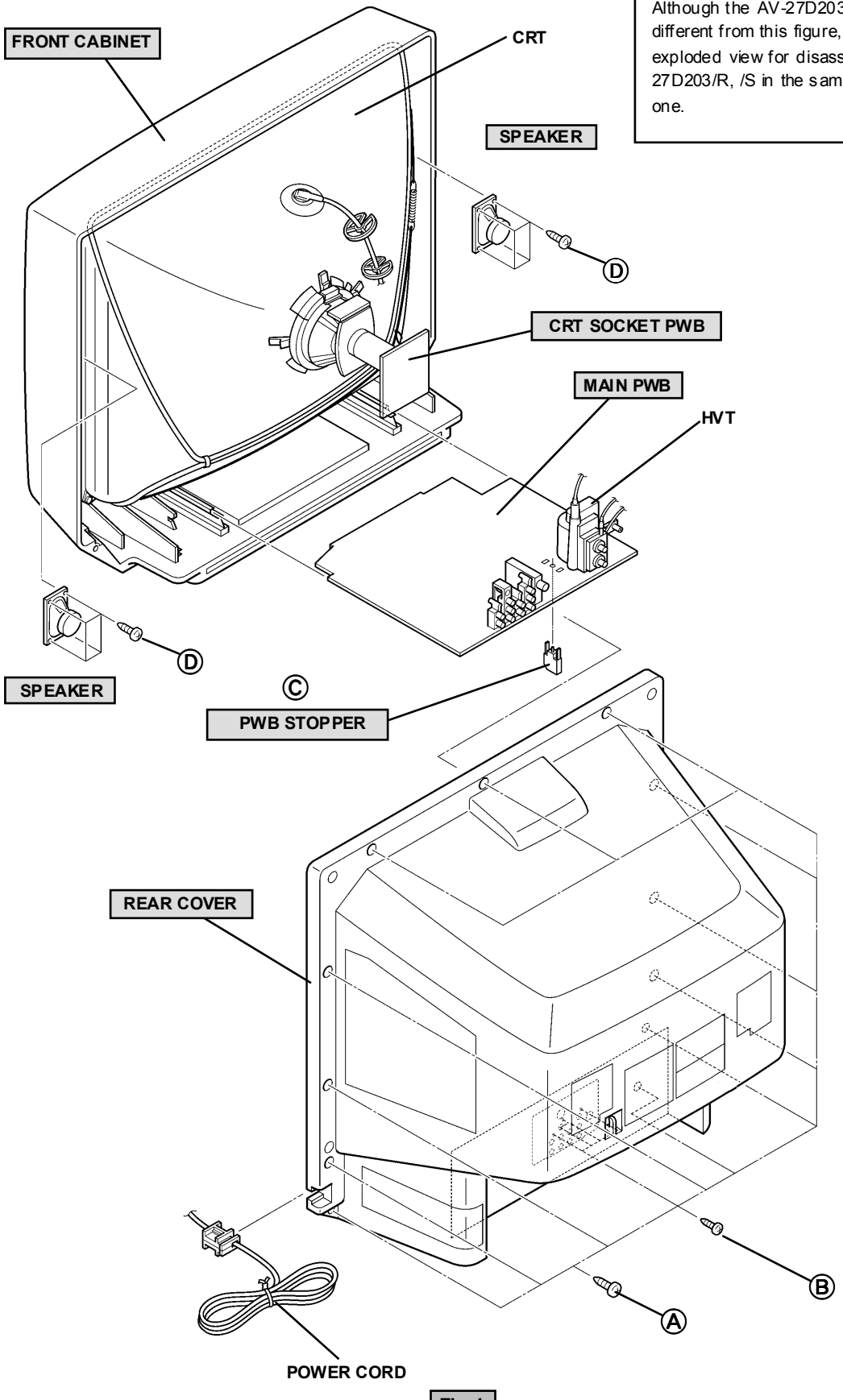


Fig.1

MEMORY IC REPLACEMENT

1. Memory IC

This TV uses memory IC.
This memory IC stores data for proper operation of the video and deflection circuits.
When replacing the memory IC, be sure to use an IC containing this (initial value) data.

2. Memory IC replacement procedure

(1) Power off
Switch off the power and disconnect the power cord from the outlet.

(2) Replace the memory IC
Be sure to use a memory IC written with the initial setting data.

(3) Power on
Connect the power cord to the outlet and switch on the power.

(4)Confirm the system constant value

- 12.SYSTEM (SYS) do not adjust normally.
- The adjustment should not be done without signal.

■ **How to enter the SYSTEM (SYS).**

1) Press the SLEEP TIMER key and set SLEEP TIMER for 「0 min」.
2) Before disappear the display of SLEEP TIMER settings, simultaneously press the DISPLAY key and VIDEO STATUS key of the remote control unit.
3) The SERVICE MENU screen of Fig.1 is displayed.
4) While the SERVICE MENU is displayed, select the SYSTEM(SYS) item with MENU▼/▲ (CH-/+) keys, and the MENU ◀/▶ (VOL-/+) keys is pressed, the screen will be displayed as shown in Fig.2.
5) Refer to the SYSTEM (SYSTEM CONSTANT) TABLE 1 and check the setting items. If the value is different, select the setting item with the MENU ▼/▲ (CH-/+) keys and adjust the setting with the MENU ◀/▶ (VOL-/+) keys. (The letters of the selected item are displayed in yellow.)
6) When adjustment has completed, the values store into memory IC automatically
7) Press the EXIT key twice to return the normal screen.

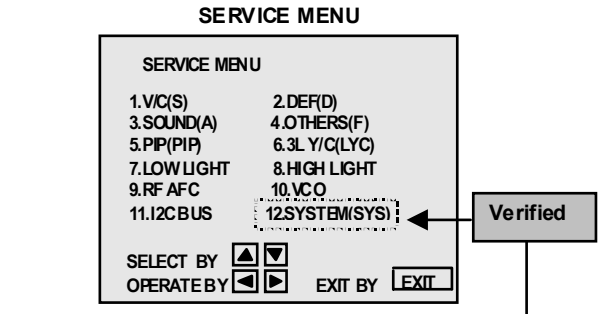


Fig.1

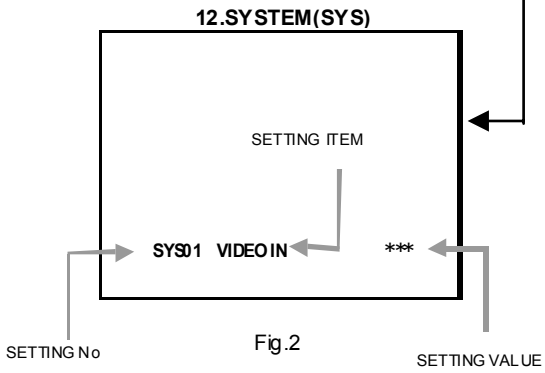


Fig.2

(5) Receive channel setting
Refer to the OPERATING INSTRUCTIONS (USER'S GUIDE) and set the receive channels (Channels Preset) as described.

(6) User settings
Check the user setting items according to TABLE 2.
Where these do not agree, refer to the OPERATING INSTRUCTIONS (USER'S GUIDE) and set the items as described.

(7) SERVICE MENU setting
Verify what to set in the SERVICE MENU, and set whatever is necessary. (Fig.1) Refer to the SERVICE ADJUSTMENT for setting.

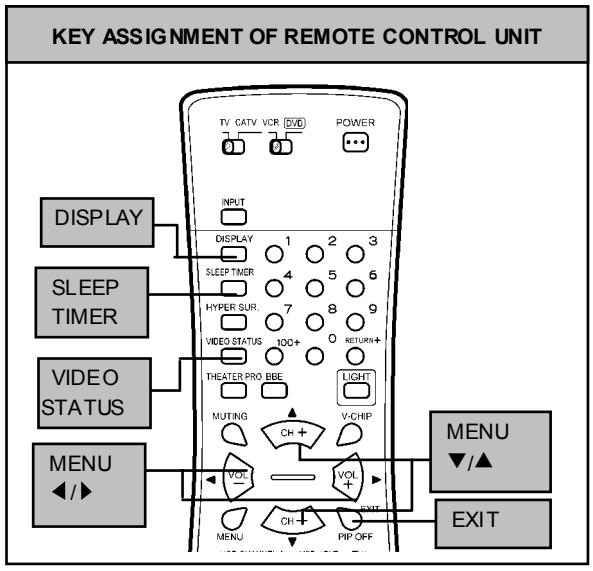


TABLE 1 (System Constant setting)

No	Setting item	Variable range	Initial setting value	No	Setting item	Variable range	Initial setting value
SYS01	VIDEO IN	0～4	**3**	SYS13	HYP SURR	0～1	**1**
SYS02	PIP	0～1	**0**	SYS14	16:9 MD	0～1	**0**
SYS03	3D Y/C	0～1	**0**	SYS15	HYP SCAN	0～1	**1**
SYS04	Y CV	0～1	**0**	SYS16	EZ SURF	0～1	**0**
SYS05	CCD PCHK	0～1	**1**	SYS17	ID DISP	0～1	**1**
SYS06	PURITY	0～1	**0**	SYS18	COMPULINK	0～1	**0**
SYS07	VM	0～1	**0**	SYS19	CCD	0～1	**1**
SYS08	NOISE CR	0～1	**0**	SYS20	VCHIP	0～1	**1**
SYS09	CLR TEMP	0～1	**1**	SYS21	VCHIP CA	0～1	**1**
SYS10	THEATER	0～1	**1**	SYS22	JVC LOGO	0～1	**1**
SYS11	THEATER PRO	0～1	**1**	SYS23	CMP IN	0～1	**1**
SYS12	BBE	0～1	**1**	SYS24	CXA1875	0～1	**0**

TABLE 2 (User setting)

Setting item	Setting value	Setting item	Setting value
Use remote controller keys			
POWER	OFF	DISPLAY	OFF
CHANNEL	CH-02	VIDEO STATUS	DYNAMIC
VOLUME	10	HYPER SURROUND	OFF
TV/VIDEO	TV	BBE	ON
Settings of MENU			
PICTURE MENU		**INITIAL SETUP MENU**	
TINT	CENTER	LANGUAGE	ENG
COLOR	CENTER	FRONT PANEL LOCK	OFF
PICTURE	CENTER+8	V2 COMPONENT-IN	NO
BRIGHT	CENTER	AUTO SHUT OFF	OFF
DETAIL	CENTER+10	CLOSED CAPTION	OFF
COLOR TEMPERATURE	HIGH	AUTO TUNER SET UP	AIR
NOISE MUTING	ON	CHANNEL SUMMARY	Unnecessary to set
SOUND ADJUST MENU		V-CHIP	OFF
BASS	CENTER	SET LOCK CODE	(0000) Unnecessary to set
TREBLE	CENTER	XDS ID	ON
MTS	STEREO		
CLOCK / TIMERS MENU			
SET CLOCK	MANUAL TIME ZONE : PACIFIC D.S.T. : OFF		
ON / OFF TIMER	OFF		

SERVICE ADJUSTMENTS

ADJUSTMENT PREPARATION

1. **You can make the necessary adjustments for this unit with either the Remote Control Unit or With the adjustment tools and parts as given below.**
2. **Adjustment with the Remote Control Unit is made on the basis of the initial setting values, however, the new setting values which set the screen to its optimum condition may differ from the initial settings.**
3. Make sure that AC power is turned on correctly.
4. Turn on the power for set and test equipment before use, and start the adjustment procedures after waiting at least 30 minutes.
5. Unless otherwise specified, prepare the most suitable reception or input signal for adjustment.
6. Never touch any adjustment parts which are not specified in the list for this adjustment - variable resistors, transformers, condensers, etc.
7. Presetting before adjustment.
   Unless otherwise specified in the adjustment instructions, preset the following functions with the remote control unit:

User menu preset value

MENU ITEM	PRESET VALUE
PICTURE MODE (VSM)	DYNAMIC → 0
BASS, TREBLE, BALANCE	CENTER
HYPER SURROUND	OFF
TINT, COLOR, PICTURE, BRIGHT, DETAIL	CENTER
MTS	STEREO
BBE	ON

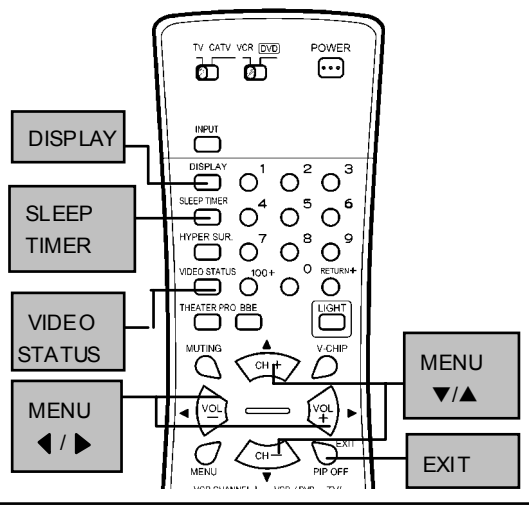
ADJUSTMENT EQUIPMENT

1. DC voltmeter (or digital voltmeter)
2. Oscilloscope
3. Signal generator (Pattern generator) [NTSC]
4. Remote control unit
5. TV audio multiplex signal generator.
6. Frequency counter

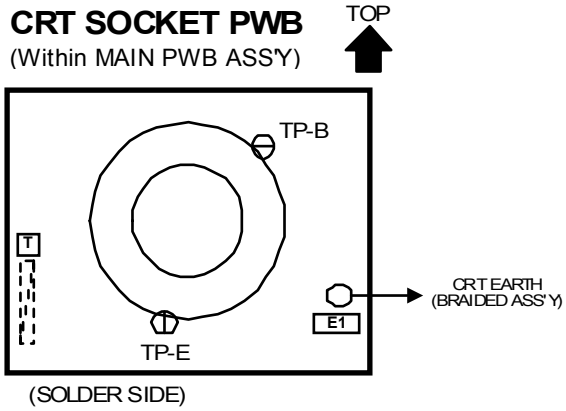
ADJUSTMENT ITEMS

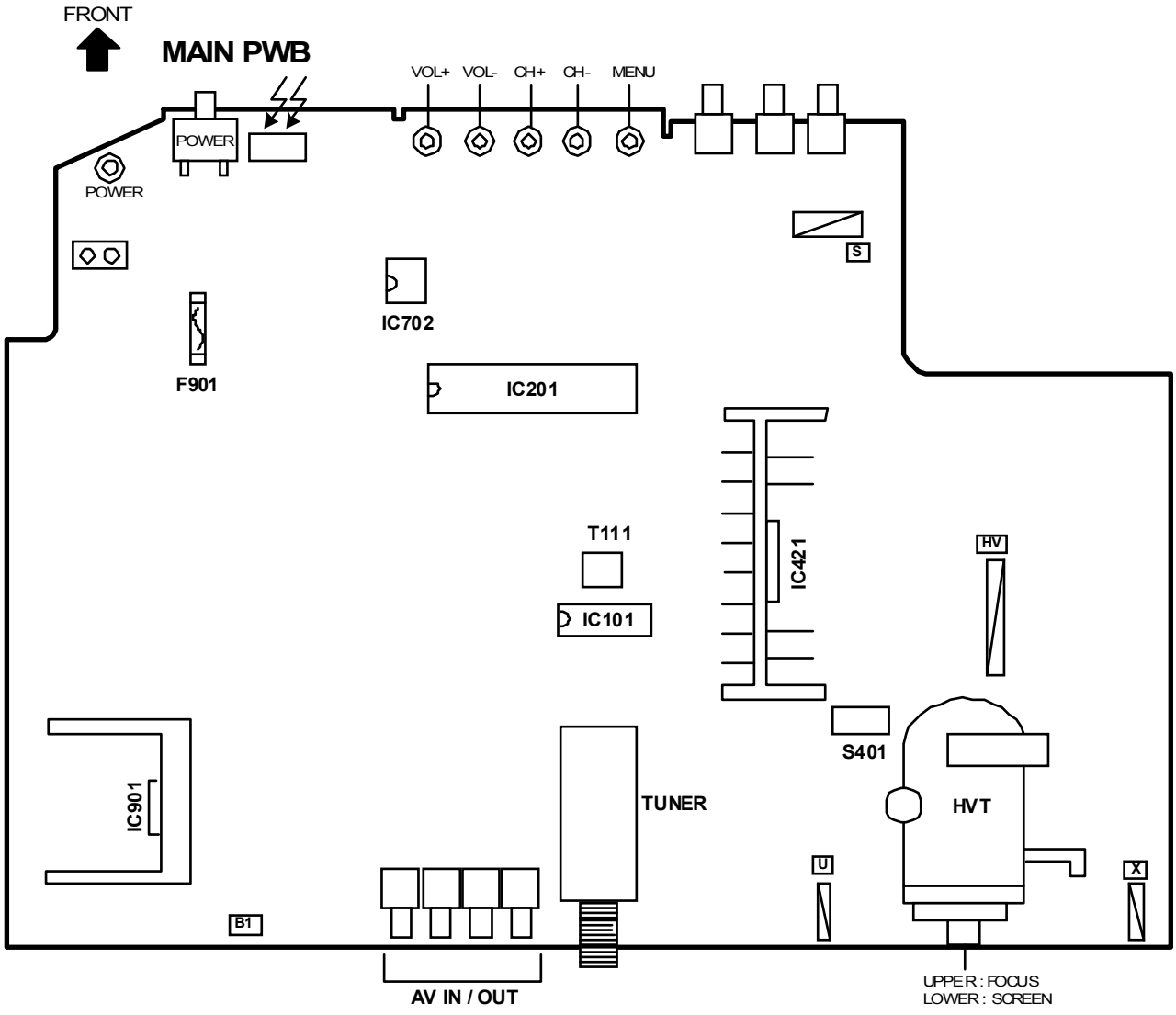
Adjustment items	Adjustment items
B1 POWER SUPPLY	SUB BRIGHT
MAIN VCO	SUB CONTRAST
RF. AGC	SUB COLOR
FOCUS	SUB TINT
V. HEIGHT V. CENTER	MTS INPUT LEVEL check
H. CENTER	MTS SEPARATION
WHITE BALANCE (Low Light)	
WHITE BALANCE (High Light)	

KEY ASSIGNMENT OF REMOTE CONTROL UNIT



ADJUSTMENT LOCATIONS





BASIC OPERATION OF SERVICE MENU

1. Operate the SERVICE MENU with the REMOTE CONTROL UNIT.

2. In general, basic setting (adjustments) items or verifications are performed in the SERVICE MENU.

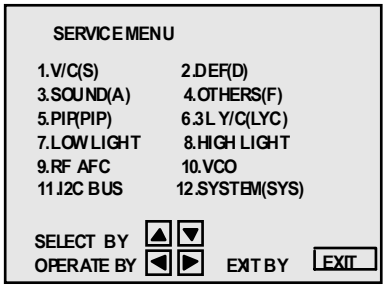
(1) V/C (S) ····· This set the setting values (adjustment values) of the VIDEO/CHROMA circuits.
(2) DEF (D) ····· This set the setting values (adjustment values) of the DEFLECTION circuit.
(3) SOUND (A) ····· This set the setting values (adjustment values) of the AUDIO circuit.
(4) OTHERS (F) ····· This is used when the OTHERS MODE is verified. **[Do not adjust]**
(5) PIP (PIP) ····· This set the setting values(adjustment values) of the PICTURE-IN-PICTURE circuit. (PIP is means as Picture In Picture) **[Do not have Function]**
(6) 3L Y/C (LCY) ····· This is used when the 3L Y/C MODE is verified. **[Do not adjust]**
(7) LOW LIGHT ····· This sets the setting values (adjustment values) of the WHITE BALANCE circuit.
(8) HIGH LIGHT ····· This sets the setting values (adjustment values) of the WHITE BALANCE circuit
(9) RF AFC ····· This is used when the RF AFC MODE is verified. **[Do not adjust]**
(10)VCO ····· This is used when the IF VCO is adjusted.
(11)I²C BUS ····· This is used when ON/OFF of the I²C BUS CTRL is set. **[Fixed ON]**
(12)SYSTEM (SYS) ····· This is used when the SYSTEM is verified. **[Do not adjust]**

3. Basic Operations of the SERVICE MENU

(1) How to enter the SERVICE MENU.

Press the **SLEEP TIMER** key and set the **SLEEP TIMER** for 「0 MIN」.

Then press the **DISPLAY** key and **VIDEO STATUS** key of the remote control unit at the same time to enter the SERVICE MENU screen.



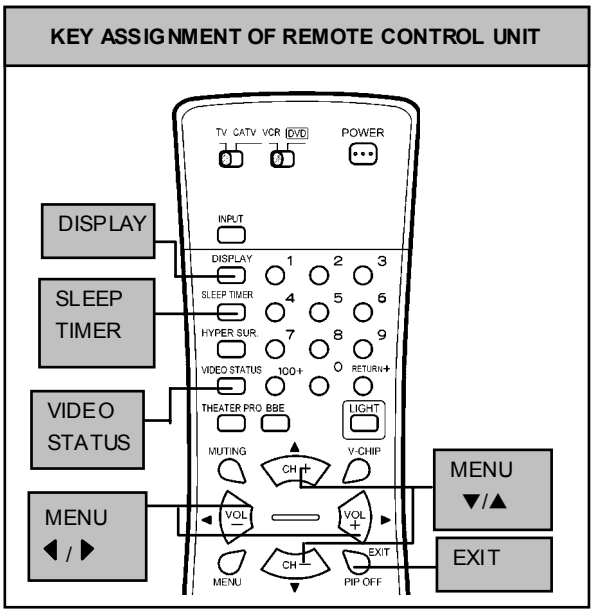
(2) SERVICE MENU screen selection

In SERVICE MENU, press the MENU▼/▲(CH-/+) key to select any of the SUB MENU items.
(The letters of the selected items are displayed in yellow.)

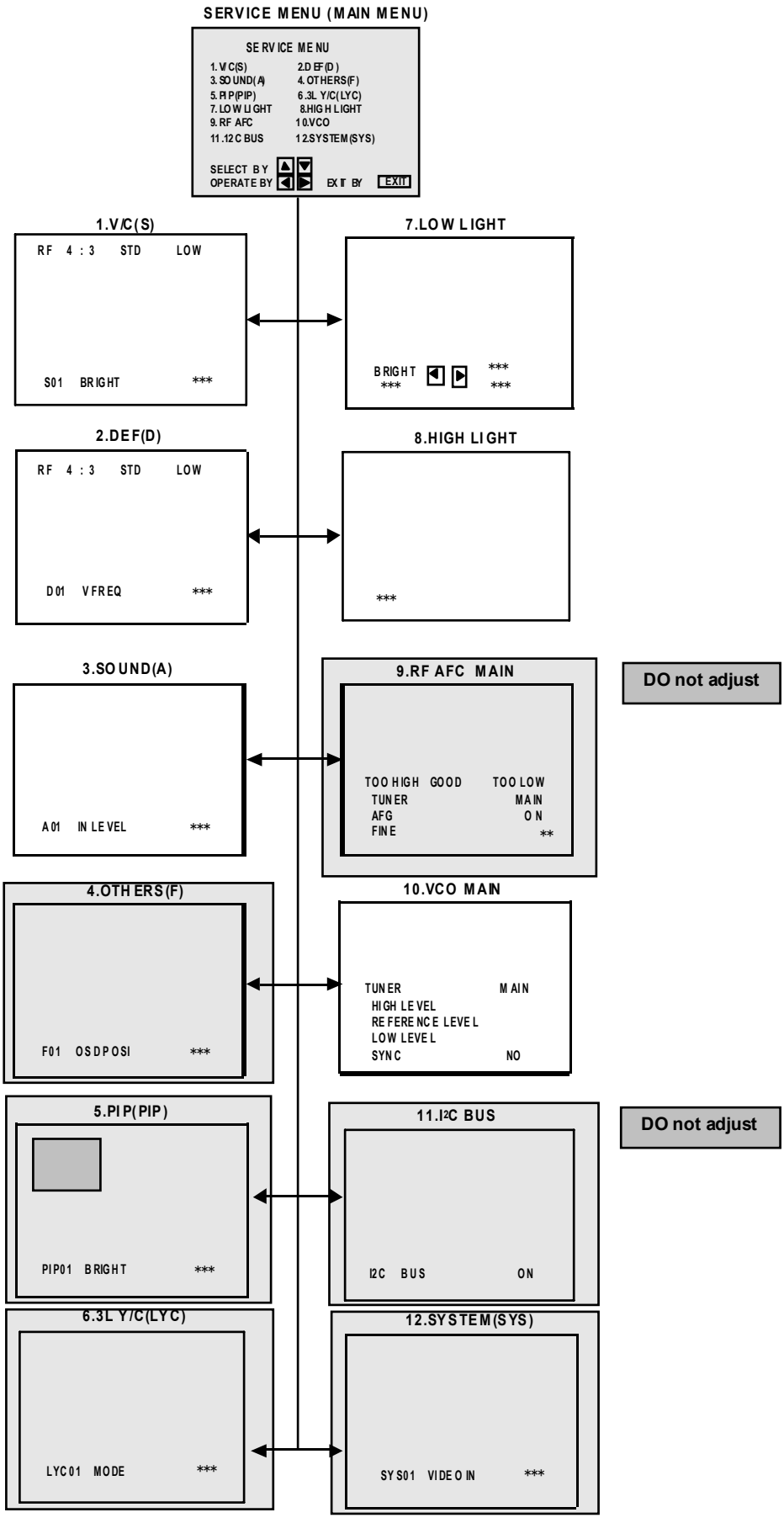
(3) Enter the any setting (adjustment) mode

- **1.V/C (S), 2.DEF (D), 3.SOUND (A), 4.OTHERS (F), 5.PIP (P), 6.3L Y/C (LYC), 7.LOW LIGHT, 8.HIGH LIGHT, 9.RF AFC 10.VCO 11.I²C BUS** and **12.SYSTEM (SYS)** mode

1) If select any of **1.V/C (S) / 2.DEF (D) / 3.SOUND (A) / 4.OTHERS (F) / 5.PIP (PIP) / 6.3L Y/C (LYC) / 7.LOW LIGHT / 8.HIGH LIGHT / 9.RF AFC / 10.VCO / 11.I²C BUS /12.SYSTEM (SYS)** items, and the MENU ◀/▶ (VOL-/+) key is pressed from SERVICE MENU (MAIN MENU), the each screens will be displayed as shown in figure page later.
2) Then the settings or verifications can be performed



SUB MENU

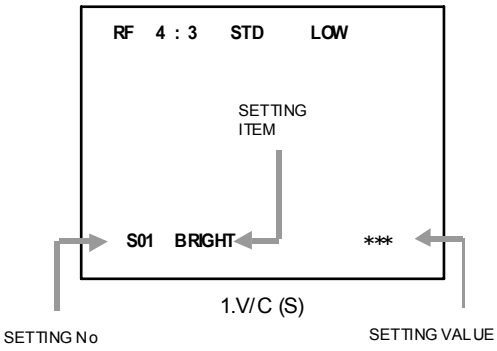

SERVICE MENU (MAIN MENU)
SERVICE MENU
1. VIC(S)
2.DEF(D)
3. SOUND(A)
4. OTHERS(F)
5. PIP(PIP)
6.3L Y/C(LYC)
7. LOW LIGHT
8.HIGH LIGHT
9. RF AFC
10.VCO
11.12C BUS
12.SYSTEM(SYS)
SELECT BY
OPERATE BY
EXIT BY
EXIT
1.VIC(S)
RF 4 : 3 STD LOW
S01 BRIGHT ***
7.LOW LIGHT
BRIGHT ***
*** ***
2.DEF(D)
RF 4 : 3 STD LOW
D01 VFREQ ***
8.HIGH LIGHT
***
3.SOUND(A)
A01 IN LEVEL ***
9.RF AFC MAIN
TOO HIGH GOOD TOO LOW
TUNER MAIN
AFG ON
FINE **
DO not adjust
4.OTHERS(F)
F01 OSDPOSI ***
10.VCO MAIN
TUNER MAIN
HIGH LEVEL
REFERENCE LEVEL
LOW LEVEL
SYNC NO
5.PIP(PIP)
PIP01 BRIGHT ***
11.I2C BUS
I2C BUS ON
DO not adjust
6.3L Y/C(LYC)
LYC01 MODE ***
12.SYSTEM(SYS)
SYS01 VIDEO IN ***

(4) Setting method

1) MENU ▼/▲ (CH-/+) key.
Select the SETTING ITEM.

2) MENU◀ /▶ (VOL-/+) key
Setting (adjust) the SETTING VALUE of the SETTING ITEM.
When the key is released the SETTING VALUE will be stored (memorized).

3) EXIT key
Returns to the previous screen.



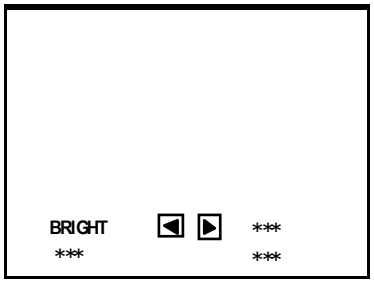
1.V/C (S)

(5) Releasing SERVICE MENU

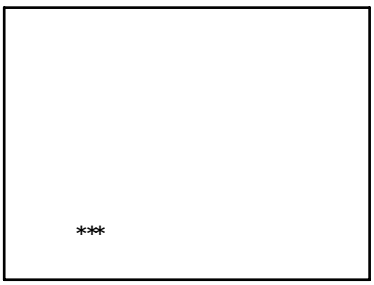
1) After returning to the SERVICE MENU upon completion of the setting (adjustment) work, press the EXIT key again.

★ The settings for LOW LIGHT and HIGH LIGHT are described in the WHITE BALANCE page of ADJUSTMENT.

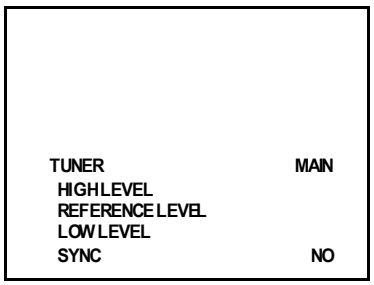
★ The setting for MAIN VCO are described in the VCO page of ADJUSTMENT.



7.LOW LIGHT



8.HIGH LIGHT



10.VCO

INITIAL SETTING VALUE OF SERVICE MENU

1. Adjustment of the SERVICE MENU is made on the basis of the initial setting values ; however, the new setting values which set the screen in its optimum condition may differ from the initial setting.
2. Do not change the initial Setting Values of the Setting (Adjustment) items not listed In "ADJUSTMENT".

● V / C MODE

-- can not be adjustment

No	Setting item	Variable range	Initial setting value					
			RF		EXTERNAL (S,CV)		COMPONENT	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S01	BRIGHT	0～127	64	--	--	--	--	--
S02	PICTURE	0～127	65	--	--	--	--	--
S03	COLOR	0～127	45	--	--	--	47	--
S04	TINT	0～127	60	--	--	--	64	--
S05	DETAIL	0～63	30	--	35	--	40	--
S06	BRIGHT +-	-128～+127	--	0	0	--	+1	--
S07	PICT+-	-128～+127	--	-15	0	--	0	--
S08	COLOR+-	-128～+127	--	-3	-2	--	--	--
S09	TINT+-	-128～+127	--	-6	+2	--	--	--
S10	DETAIL+-	-128～+127	--	+3	--	--	--	--

No	Setting item	Variable range	Initial setting value							
			RF/EXT (S,CV)				COMPONENT			
			STANDARD		THEATER		STANDARD		THEATER	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
S11	R CUT OFF	0～255	50	--	--	--	--	--	--	--
S12	G CUT OFF	0～255	50	--	--	--	--	--	--	--
S13	B CUT OFF	0～255	50	--	--	--	--	--	--	--
S14	R DRIVE	0～127	64	--	--	--	--	--	--	--
S15	B DRIVE	0～127	64	0	--	--	--	--	--	--
S16	R CUT+-	-128～+127	--	0	0	0	-10	--	--	--
S17	G CUT+-	-128～+127	--	0	0	0	0	--	--	--
S18	B CUT+-	-128～+127	--	0	0	0	-10	--	--	--
S19	R DRV+-	-128～+127	--	0	+5	+7	0	--	--	--
S20	B DRV+-	-128～+127	--	0	+6	-9	0	--	--	--
S21	NTSC MAT	0～3	3	3	3	1	2	2	1	1
S22	BLACK ST	0～3	1	--	--	--	--	--	--	--
S23	DCREST	0～1	1	--	--	--	--	--	--	--
S24	DCRSW	0～1	1	--	--	--	--	--	--	--

No	Setting item	Variable range	Initial setting value		
			RF	EXTERNAL (S,CV)	COMPONENT
S25	ASY SHRP	0～7	4	4	4
S26	BPF FO	0～1	0	0	--
S27	KILR OFF	0～1	0	0	--
S28	KILR SEN	0～1	1	1	--

No	Setting item	Variable range	Initial setting value	No	Setting item	Variable range	Initial setting value
S29	RGB MUTE	0～1	**0**	S39	Y MUTE	0～1	**0**
S30	BLUE B	0～1	**0**	S40	SVM GAIN	0～3	**0**
S31	VIDEO SW	0～3	**3**	S41	SVM PH	0～3	**0**
S32	CMP ABCL	0～15	**0**	S42	WPL	0～1	**0**
S33	RGB ABCL	0～1	**0**	S43	COL GMM	0～1	**0**
S34	OSD CONT	0～63	**9**	S44	V1 GAIN	0～1	**4**
S35	SUB CONT	0～15	**8**	S45	AGC ADJ	0～127	**80**
S36	ABL GAIN	0～3	**0**	S46	VMOFF DE	-128～+127	**0**
S37	ABL PNT	0～3	**3**	S47	APC CLK	0～1	**1**
S38	Y GAMMA	0～3	**1**				

-- can not be adjustment

● **DEF MODE**

No	Setting item	Variable range	Initial setting value	No	Setting item	Variable range	Initial setting value
D01	V FREQ	0～3	**0**	D18	WVMT BTM	0～3	**0**
D02	AFC GAIN	0～3	**0**	D19	EWCR TOP	0～31	**16**
D03	H POSI	0～31	**12**	D20	EWCR T+-	-128～+127	**--**
D04	H POSI+-	-128～+127	**--**	D21	EWCR BTM	0～31	**16**
D05	V PHASE	0～7	**0**	D22	EWCR B+-	-128～+127	**--**
D06	V PH+-	-128～+127	**--**	D23	EW PARA	0～63	**26**
D07	V SIZE	0～+127	**55**	D24	EW PRA+-	-128～+127	**--**
D08	V SIZE+-	-128～+127	**--**	D25	V EHT	0～7	**0**
D09	V CENTER	0～63	**32**	D26	V EHT+-	-128～+127	**--**
D10	V CENT+-	-128～+127	**--**	D27	H EHT	0～7	**0**
D11	V S CORR	0～15	**4**	D28	H EHT+-	-128～+127	**--**
D12	V S CO+-	-128～+127	**--**	D29	TRAPEZ	0～63	**34**
D13	V LIN	0～15	**11**	D30	TRAPEZ+-	-128～+127	**--**
D14	V LIN+-	-128～+127	**--**	D31	V AGC	0～1	**0**
D15	H SIZE	0～63	**32**	D32	BLANK SW	0～1	**0**
D16	H SIZE+-	-128～+127	**--**	D33	VRMP BI	0～1	**0**
D17	WVMT TOP	0～3	**0**				

● **SOUND MODE**

No	Setting item	Variable range	Initial setting value
A01	IN LEVEL	0～15	**012**
A02	LOW SEP	0～63	**039**
A03	HI SEP	0～63	**016**
A04	SAPC	0～1	**000**
A05	BBE BASS	-128～+127	**-006**
A06	BBE TRE	-128～+127	**-006**

Setting item can not display

● **OTHERS MODE (Do not adjust)**

No	Setting item	Variable range	Initial setting value	No	Setting item	Variable range	Initial setting value
F01	OSD POSI	0～255	**27**	F15	VCSN 1	0～63	**0**
F02	OSD PREQ	0～255	**83**	F16	VCSN 2	0～255	**10**
F03	CCD POSI	0～63	**45**	F17	VCSN 3	0～63	**20**
F04	CCD FREQ	0～255	**93**	F18	VCSN STP	0～63	**02**
F05	OSD CONT	0～63	**11**	F19	VN DAT A	-128～+127	**+8**
F06	PUR WBCK	0～2	**0**	F20	VM DAT B	-128～+127	**-4**
F07	PUR CONT	0～255	**62**	F21	VM DAT C	-128～+127	**-10**
F08	SN TYPE	0～255	**0**	F22	VM DAT D	-128～+127	**-16**
F09	YCSN TM	0～255	**5**	F23	VM DAT E	0～255	**0**
F10	YCSN E	0～63	**5**	F24	VMOFF TY	0～63	**0**
F11	YCSN F	0～255	**16**	F25	YC VMOFF	0～255	**255**
F12	YCSN G	0～255	**32**	F26	EZSF TM	0～255	**40**
F13	VNR CHK	0～63	**3**	F27	XDSID TM	0～255	**15**
F14	VCSN TM	0～255	**5**	F28	FM TRAP	0～1	**1**

● **3L Y / C MODE (Do not adjust)**

No	Setting item	Variable range	Initial setting value
LYC01	MODE	0～7	**4**
LYC02	VENH	0～7	**1**
LYC03	PDSOFF	0～1	**0**
LYC04	CB	0～1	**0**
LYC05	VNLR	0～15	**2**
LYC06	GSEL0	0～1	**0**
LYC07	GSEL1	0～1	**1**
LYC08	COR	0～3	**0**
LYC09	TRAP	0～1	**1**
LYC10	CHTRAP	0～1	**0**
LYC11	CBPF	0～1	**0**
LYC12	ENHOFF	0～1	**0**

● **SYSTEM MODE (Do not adjust)**

No	Setting item	Variable range	Initial setting value	No	Setting item	Variable range	Initial setting value
SYS01	VIDEO IN	0～4	**3**	SYS13	HYP SURR	0～1	**1**
SYS02	PIP	0～1	**0**	SYS14	16:9 MD	0～1	**0**
SYS03	3D Y/C	0～1	**0**	SYS15	HYP SCAN	0～1	**1**
SYS04	Y CV	0～1	**0**	SYS16	EZ SURF	0～1	**0**
SYS05	CCD PCHK	0～1	**1**	SYS17	ID DISP	0～1	**1**
SYS06	PURITY	0～1	**0**	SYS18	COMPULINK	0～1	**0**
SYS07	VM	0～1	**0**	SYS19	CCD	0～1	**1**
SYS08	NOISE CR	0～1	**0**	SYS20	VCHIP	0～1	**1**
SYS09	CLR TEMP	0～1	**1**	SYS21	VCHIP CA	0～1	**1**
SYS10	THEATER	0～1	**1**	SYS22	JVC LOGO	0～1	**1**
SYS11	THEATER PRO	0～1	**1**	SYS23	CMP IN	0～1	**1**
SYS12	BBE	0～1	**1**	SYS24	CXA1875	0～1	**0**

● **PIP MODE (Do not adjust)**

No	Setting item	Variable range	Initial setting value	No	Setting item	Variable range	Initial setting value
PIP01	BRIGHT	0～15	**0**	PIP27	UVPOLAR	0～1	**0**
PIP02	PICTURE	0～255	**30**	PIP28	MAT	0～1	**1**
PIP03	TINTI	0～63	**42**	PIP29	YCOR	0～1	**1**
PIP04	COLOR	0～15	**6**	PIP30	XFREQF	0～1	**1**
PIP05	R CUTOFF	0～15	**0**	PIP31	WTCHDG	0～1	**1**
PIP06	G CUTOFF	0～15	**0**	PIP32	COLON	0～1	**0**
PIP07	B CUTOFF	0～15	**0**	PIP33	ACQNEW	0～1	**0**
PIP08	R DRIVE	0～255	**65**	PIP34	DSTDET	0～1	**1**
PIP09	G DRIVE	0～255	**65**	PIP35	CRIBEOK	0～1	**0**
PIP10	B DRIVE	0～255	**63**	PIP36	FCBEOK	0～1	**0**
PIP11	L POSI	0～255	**22**	PIP37	NOCRID	0～1	**0**
PIP12	R POSI	0～255	**15**	PIP38	NONSED	0～1	**0**
PIP13	UPR POSI	0～127	**12**	PIP39	PIP ADJ	0～15	**4**
PIP14	LWR POSI	0～127	**11**	PIP40	BRI EXT	-128～+127	**0**
PIP15	PICT LCK	0～1	**1**	PIP41	PCT EXT	-128～+127	**0**
PIP16	SELDEL	0～15	**0**	PIP42	TNT EXT	-128～+127	**0**
PIP17	AGCFIX	0～1	**1**	PIP43	COR EXT	-128～+127	**0**
PIP18	AGCADST	0～1	**0**	PIP44	R-D EXT	-128～+127	**0**
PIP19	AGC	0～15	**7**	PIP45	G-D EXT	-128～+127	**0**
PIP20	BLKINVB	0～1	**0**	PIP46	B-D EXT	-128～+127	**0**
PIP21	BLKINVR	0～1	**0**	PIP47	BRT COMP	-128～+127	**0**
PIP22	VSPDEL	0～31	**0**	PIP48	PCT COMP	-128～+127	**0**
PIP23	VSPISQ	0～1	**1**	PIP49	TNT COMP	0～40	**0**
PIP24	RGBIN	0～1	**0**	PIP50	COR COMP	0～15	**0**
PIP25	FRSEL	0～1	**1**	PIP51	R-D COMP	-128～+127	**0**
PIP26	OUTFOR	0～1	**0**	PIP52	G-D COMP	-128～+127	**0**
				PIP53	B-D COMP	-128～+127	**0**

NOTE The AV-27D303/S /R, AV-27D203/S /R model do not have PIP function, But, if memory data is out of variable range, occasionally some problems happen. Then we need to input these data.

● **LOW LIGHT MODE**

No	Setting item	Variable range	Initial setting value
1	RED	0～255	**50**
2	GREEN	0～255	**50**
3	BLUE	0～255	**50**

● **HIGH LIGHT MODE**

No	Setting item	Variable range	Initial setting value
1	RED	0～255	**64**
2	BLUE	0～255	**64**

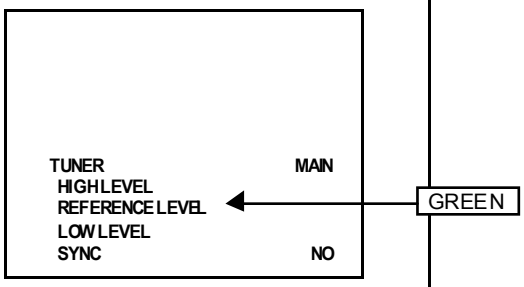
■ ADJUSTMENTS

B1 POWER SUPPLY

Item	Measuring instrument	Test point	Adjustment part	Description
Check of B1 POWER SUPPLY	DC Voltmeter	【B1】 Connector TP-91 TP-E(⏚)		1. Receive the black-and-white signal. (color off) 2. Connect the DC voltmeter to【B1】connector【1】pin (TP-91) and TP-E(⏚) (B1 connector【3】pin). 3. Confirm that the voltage is DC134V±2V.

ADJUSTMENT OF VCO

Item	Measuring instrument	Test point	Adjustment part	Description
MAIN VCO adjustment	Signal generator		10.VCO MAIN CW TRANSF.(T111) [MAIN PWB]	● It must not adjust without signal 1. Select a receivable broadcast. 2. Push the MENU ▼/▲(CH-/+) key, and select the 10.VCO mode from the SERVICE MENU. 3. Push the MENU ◀/▶ (VOL-/+) key, and select MAIN. 4. Confirm that the color change from 「HIGH LEVEL」 to 「LOW LEVEL」 by CW TRANSF T111 at MAIN PWB, and check the 「SYNC : YES」. 5. Adjust until 「REFFERENCE LEVEL」 mark turns green. And then confirm that the 「SYNC : YES」 again.



ADJUSTMENT OF RF AGC

Item	Measuring instrument	Test point	Adjustment part	Description
RF. AGC adjustment			S45 AGC ADJ	1. Receive a black and white signal (color off). 2. Select **S45 AGC ADJ** of the V/C MODE. 3. Press the MUTING key and turn off color. 4. With the MENU ◀(VOL-) key to get the noise in the screen picture (zero side of setting value). 5. Press the MENU ▶(VOL+) key several times and step when noise disappears from the screen (at that time, not to increase the value too much). 6. Change to other channels and make sure that there Is no irregularity. 7. Press the MUTING key and get color out.

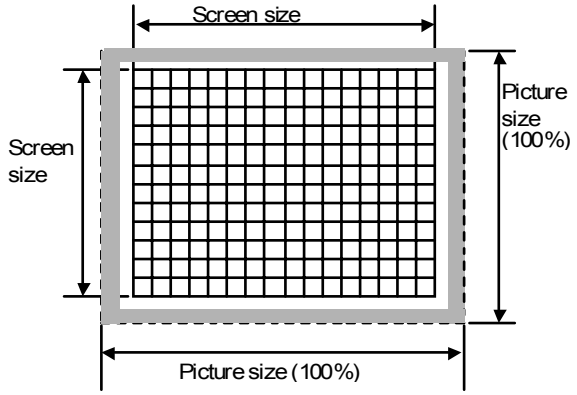
No	Setting item	Variable range	Initial setting value
S45	AGC ADJ	0～127	80

ADJUSTMENT OF FOCUS

Item	Measuring instrument	Test point	Adjustment part	Description
FOCUS adjustment	**Signal generator**		**FOCUS VR [In HVT]**	1. Receive the cross-hatch signal. 2. While looking at the screen, adjust the FOCUS VR to the vertical and horizontal lines will be clear and in fine detail. 3. Make sure that the picture is in focus even when the screen gets darkened.

ADJUSTMENT OF DEFLECTION CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
V. HEIGHT V. CENTER adjustment	**Signal generator**		**D05 V PHASE D07 V SIZE V. CENTER SW (S401) [MAIN PWB]**	1. Receive the cross-hatch signal. 2. Select the **D05 V PHASE** of the DEF (D) mode, and it checks that the value of **D05 V PHASE** is 0. 3. Adjust the vertical screen size of the screen top to 92% with the **D07 V SIZE** and V **CENTER SW S401**
H. CENTER adjustment	**Signal generator**		**D03. H POSI**	1. Receive the cross-hatch signal. 2. Select **D03. H POSI** from DEF (D) mode. 3. Adjust by **H POSITION** to be same size at both side.



Model	Vertical screen size
AV-27D303/S	**89.0%**
AV-27D203/S	**89.0%**
AV-27D303/R	**92.0%**
AV-27D203/R	**92.0%**

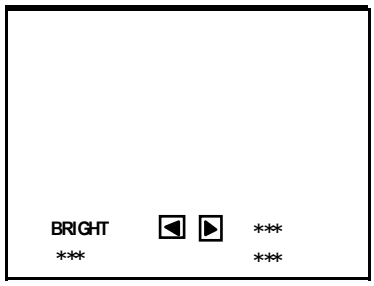
No	Setting item	Variable range	Initial setting value
D05	**V PHASE**	0～7	**0**
D07	**V SIZE**	0～127	**55**

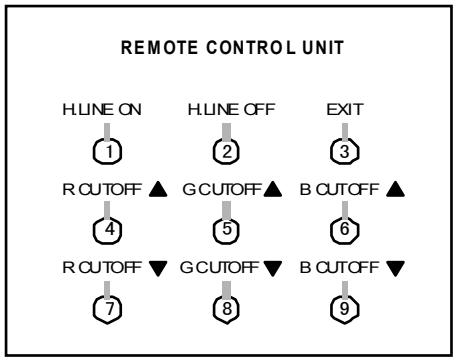
No	Setting item	Variable range	Initial setting value
D03	**H POSI**	0～31	**12**

ADJUSTMENT OF WHITE BALANCE

Item	Measuring instrument	Test point	Adjustment part	Description
WHITE BALANCE (Low Light) adjustment	**Signal generator**		**R CUTOFF (S11)** **G CUTOFF (S12)** **B CUTOFF (S13)** **BRIGHT(S01)** **SCREEN VR** **[in HVT]**	1. Receive the black and white signal (color off). 2. Select the [LOW LIGHT] MODE from the SERVICE MENU. 3. Set the initial setting value of "R CUTOFF", "G CUTOFF" "B CUTOFF" and BRIGHT. 1. Display a single horizontal line by pressing the ① key of the remote control unit. 5. Turn the screen VR all the way to the left. 6. Turn the screen VR gradually to the right from the left until either one of the red, blue or green colors appears faintly. 7. Adjust the two colors which did not appear until the single horizontal line that is displayed becomes white using the ④ to ⑨ keys of the remote control unit. 8. Turn the screen VR until the single horizontal line is displayed faintly. 9. Press the ② key to cancel the single horizontal line mode. 10. Adjust the BRIGHT level to become the black component shines white slightly. 11. Confirm that whether the color ingredient of R,G, or B is visible to the black component, which shines white slightly 12. When the color ingredient can be seen, two colors other than a visible color are adjusted, and it is made to look white. 13. Return the value of BRIGHT to initial setting value. ●The ③ EXIT key is the cancel key for the WHITE BALANCE.

[LOW LIGHT]





No	Setting item	Variable range	Initial setting value
S11	**R CUT OFF**	0～255	**50**
S12	**G CUT OFF**	0～255	**50**
S13	**B CUT OFF**	0～255	**50**
S01	**BRIGHT**	0～127	**64**

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>WHITE BALANCE (High Light) adjustment

[HIGH LIGHT]
***</td><td>Signal generator</td><td></td><td>R DRIVE (S14)
B DRIVE (S15)</td><td>1. Receive the black-and-white signal (color off).
2. Select the [HIGH LIGHT] MODE in the SERVICE MENU.
3. Set the initial setting value of “R DRIVE” and “B DRIVE” with the ④, ⑥, ⑦and ⑨ keys of the remote control unit.
4. Adjust the screen until it becomes white using the ④, ⑥, ⑦ and ⑨ keys of the remote control unit.
●The ③ EXIT key is the cancel key for the WHITE BALANCE.
Remote Control Unit
①key : H.LINE ON
②key : H.LINE OFF
③key : EXIT
④key : R DRIVE ▲
⑥key : B DRIVE ▲
⑦key : R DRIVE ▼
⑨key : B DRIVE ▼
<table><tr><th>No</th><th>Setting item</th><th>Variable range</th><th>Initial setting value</th></tr><tr><td>S14</td><td>R DRIVE</td><td>0～127</td><td>64</td></tr><tr><td>S15</td><td>B DRIVE</td><td>0～127</td><td>64</td></tr></table></td></tr>
<tr><td>SUB BRIGHT adjustment

<table><tr><th>No</th><th>Setting item</th><th>Variable range</th><th>Initial setting value</th></tr><tr><td>S01</td><td>BRIGHT</td><td>0～127</td><td>64</td></tr></table></td><td></td><td></td><td>S01. BRIGHT</td><td>1. Receive the broadcast.
2. Select S01. BRIGHT of the V/C MODE.
3. Set the initial setting value of the S01. BRIGHT with the MENU◀/▶ (VOL-/+) key.
4. If the brightness is not the best with the initial setting value, make fine adjustment of the S01. BRIGHT until you get the optimum brightness.</td></tr>
<tr><td>SUB CONTRAST adjustment

<table><tr><th>No</th><th>Setting item</th><th>Variable range</th><th>Initial setting value</th></tr><tr><td>S02</td><td>PICTURE</td><td>0～127</td><td>65</td></tr></table></td><td></td><td></td><td>S02. PICTURE</td><td>1. Receive the broadcast.
2. Select S02. PICTURE of the V/C MODE.
3. Set the initial setting value of the S02. PICTURE with the MENU◀/▶ (VOL-/+) key.
4. If the contrast is not the best with the initial setting value, make fine adjustment of the S02. PICTURE until you get the optimum contrast.</td></tr>
</table>

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>SUB COLOR adjustment</td><td>Signal generator

Remote control unit</td><td></td><td>S03. COLOR</td><td>[Method of adjustment without measuring instrument]

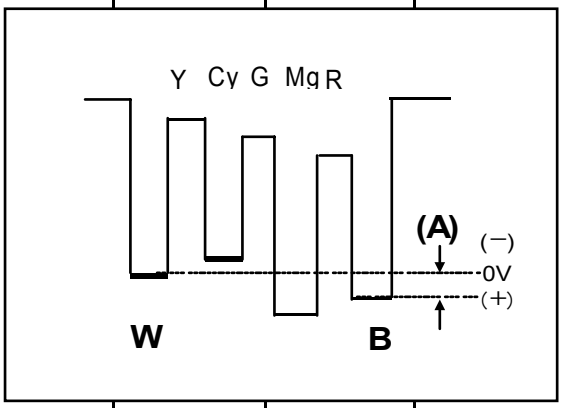
1. Receive the broadcast.
2. Select S03. COLOR of the V/C MODE.
3. Set the initial setting value of the S03. COLOR with the MENU◀/▶ (VOL-/+) key.
4. If the color is not the best with the Initial setting value, make fine adjustment of the S03. COLOR until you get the optimum color.

<table>
<tr><th>No</th><th>Setting item</th><th>Variable range</th><th>Initial setting value</th></tr>
<tr><td>S03</td><td>COLOR</td><td>0～127</td><td>45</td></tr>
</table>
</td></tr>
<tr><td></td><td>Signal generator

Oscilloscope

Remote control unit</td><td>TP-B
TP-E(⏚)
[CRT SOCKET PWB]</td><td>S03. COLOR</td><td>[Method of adjustment using measuring instrument]

1. Input the full field color bar signal (75% white).
2. Select S03. COLOR of the V/C MODE.
3. Set the initial setting value of the S03. COLOR with the MENU◀/▶ (VOL-/+) key.
4. Connect the oscilloscope between TP-B and TP-E.
5. Adjust COLOR and bring the value of (A) in the illustration to the voltage shown in the table bellow.



<table>
<tr><th>W-B / Models</th><th>Voltage</th></tr>
<tr><td>AV-27D303/S</td><td>+15V</td></tr>
<tr><td>AV-27D203/S</td><td>+15V</td></tr>
<tr><td>AV-27D303/R</td><td>+17V</td></tr>
<tr><td>AV-27D203/R</td><td>+17V</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>SUB TINT adjustment</td><td>Signal generator

Remote control unit</td><td></td><td>S04. TINT</td><td>[Method of adjustment without measuring instrument]

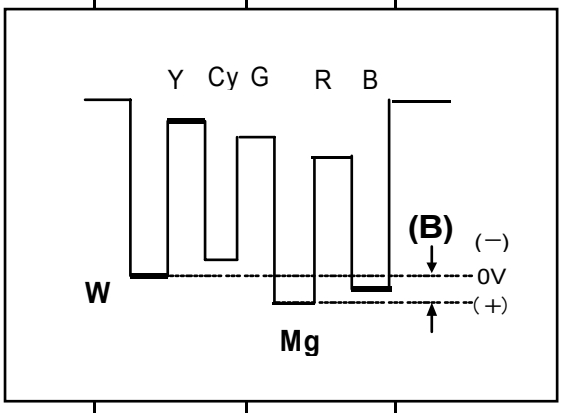
1. Receive the broadcast.
2. Select S04. TINT of the V/C MODE.
3. Set the initial setting value of the S04. TINT with the MENU ◀/▶ (VOL-/+) key.
4. If the tint is not the best with the initial setting value, make fine adjustment of the S04. TINT until you get the optimum tint.

<table>
<tr><th>No</th><th>Setting item</th><th>Variable range</th><th>Initial setting value</th></tr>
<tr><td>S04</td><td>TINT</td><td>0～127</td><td>60</td></tr>
</table>
</td></tr>
<tr><td></td><td>Signal generator

Oscilloscope

Remote control unit</td><td>TP-B
TP-E(⏚)
[CRT SOCKET PWB]</td><td>S04. TINT</td><td>[Method of adjustment using measuring instrument]

1. Input the full field color bar signal (75% white).
2. Select S04. TINT of the V/C MODE.
3. Set the initial setting value of the S04. TINT with the MENU ◀/▶ (VOL-/+) key.
4. Connect the oscilloscope between TP-B and TP-E.
5. Adjust TINT and bring the value of (B) in the illustration to the voltage shown in the table bellow.



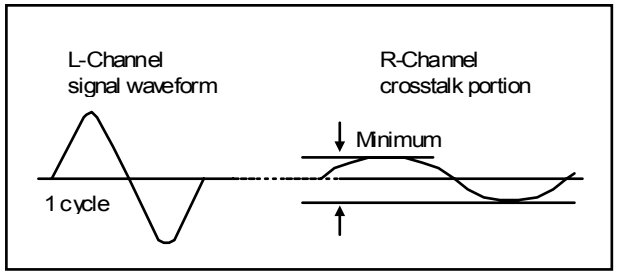
<table>
<tr><th>W-Mg / Models</th><th>Voltage</th></tr>
<tr><td>AV-27D303/S</td><td>+20V</td></tr>
<tr><td>AV-27D203/S</td><td>+20V</td></tr>
<tr><td>AV-27D303/R</td><td>+25V</td></tr>
<tr><td>AV-27D203/R</td><td>+25V</td></tr>
</table>
</td></tr>
</table>

ADJUSTMENT OF MTS CIRCUIT

<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment part</th><th>Description</th></tr>
<tr><td>MTS INPUT LEVEL check</td><td></td><td></td><td>A01 IN LEVEL</td><td>1. Select the A01 IN LEVEL of the SOUND MODE.
2. Verify that the A01 IN LEVEL is set at its initial setting value.

<table><tr><th>No</th><th>Setting item</th><th>Variable range</th><th>Initial setting value</th></tr><tr><td>A01</td><td>IN LEVEL</td><td>0～15</td><td>012</td></tr></table></td></tr>
<tr><td>MTS SEPARATION adjustment</td><td>TV audio multiplex signal generator

Oscilloscope</td><td>R OUT
L OUT
[AUDIO OUT]</td><td>A02 LOW SEP.
A03 HI SEP.</td><td>1. Input the stereo L signal (300Hz) from the TV audio multiplex signal generator to the antenna terminal.
2. Connect an oscilloscope to R OUT pin of the AUDIO OUT, and display one cycle portion of the 300Hz signal.
3. Select the A02 LOW SEP. of the SOUND MODE.
4. Set the initial setting value of the A02 LOW SEP. with the MENU ◀/▶(VOL-/+) key.
5. Adjust the A02 LOW SEP. so that the stroke element of the 300Hz signal will become minimum.
6. Change the connection of the oscilloscope to L OUT pin of the AUDIO OUT, and enlarge the voltage axis.
7. Change the signal to 3kHz, and similarly adjust the A03 HI SEP.

<table><tr><th>No</th><th>Setting item</th><th>Variable range</th><th>Initial setting value</th></tr><tr><td>A02</td><td>LOW SEP.</td><td>0～63</td><td>039</td></tr><tr><td>A03</td><td>HI SEP.</td><td>0～63</td><td>016</td></tr></table></td></tr>
</table>

HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT

1. HIGH VOLTAGE HOLD DOWN CIRCUIT

After repairing the high voltage hold down circuit shown in Fig. 1.
This circuit shall be checked to operate correctly.

2. CHECKING OF THE HIGH VOLTAGE HOLD DOWN CIRCUIT

(1) Turn the power switch to on.

(2) As shown in Fig. 1, set the resistor between [X] connector [1] and [3] .

(3) Make sure that the screen picture disappears.

(4) Temporarily unplug the power plug.

(5) Remove the resistor replaced [X] connector [1] and [3] .

(6) Again plug the power plug, make sure that the normal picture is displayed on the screen.

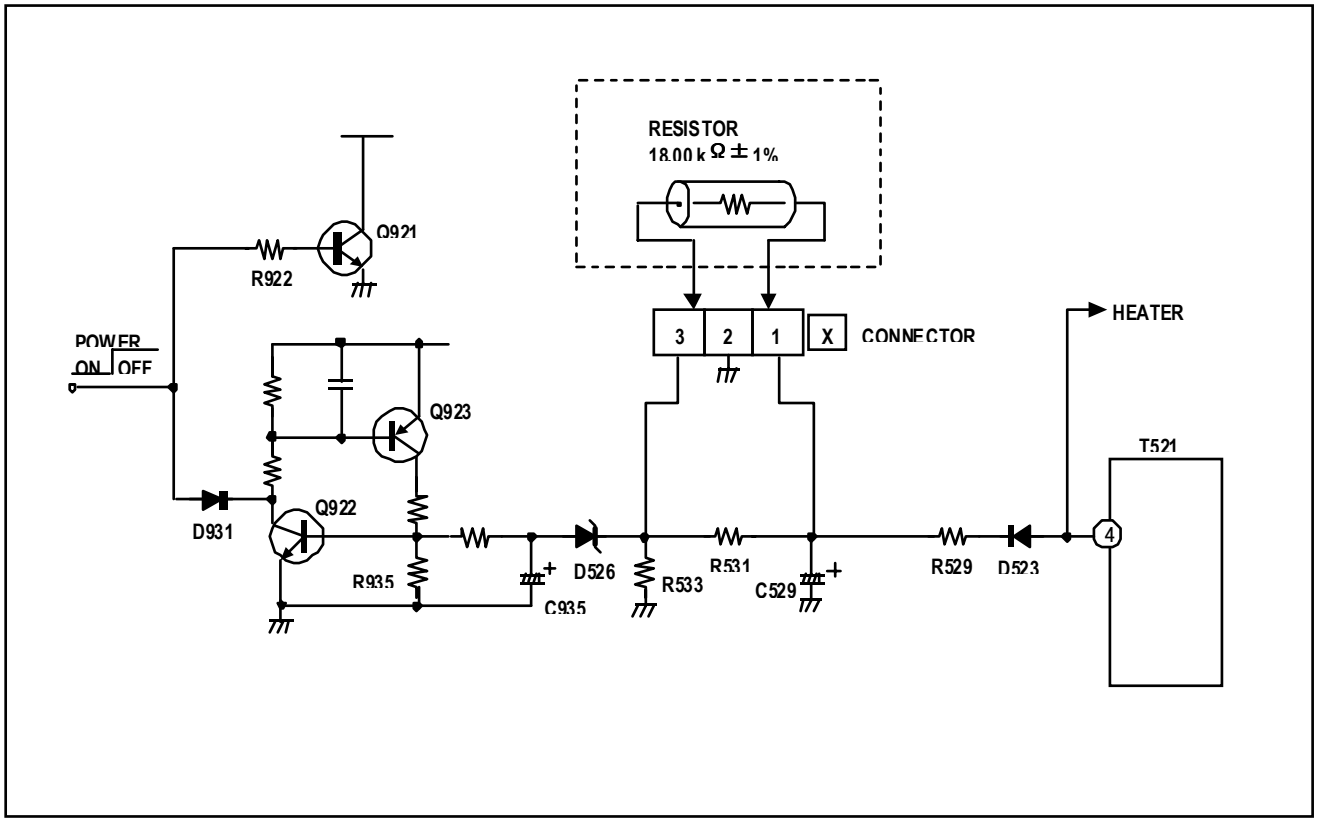


Fig. 1

REPLACEMENT OF CHIP COMPONENT

■ CAUTIONS

1. Avoid heating for more than 3 seconds.
2. Do not rub the electrodes and the resist parts of the pattern.
3. When removing a chip part, melt the solder adequately.
4. Do not reuse a chip part after removing it.

■ SOLDERING IRON

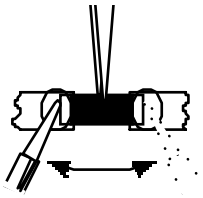
1. Use a high insulation soldering iron with a thin pointed end of it.
2. A 30w soldering iron is recommended for easily removing parts.

■ REPLACEMENT STEPS

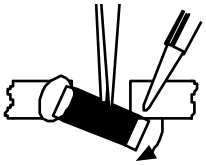
1. How to remove Chip parts

◆ **Resistors, capacitors, etc**

(1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.

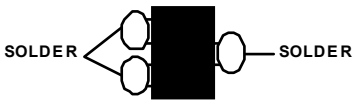


(2) Shift with tweezers and remove the chip part.

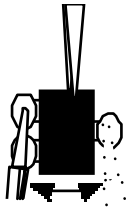


◆ **Transistors, diodes, variable resistors, etc**

(1) Apply extra solder to each lead.



(2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.

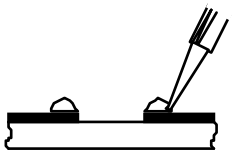


Note : After removing the part, remove remaining solder from the pattern.

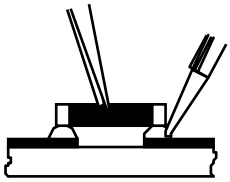
2. How to install Chip parts

◆ **Resistors, capacitors, etc**

(1) Apply solder to the pattern as indicated in the figure.



(2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

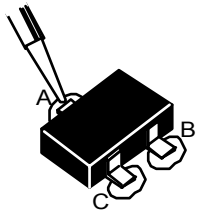


◆ **Transistors, diodes, variable resistors, etc**

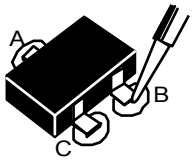
(1) Apply solder to the pattern as indicated in the figure.

(2) Grasp the chip part with tweezers and place it on the solder.

(3) First solder lead **A** as indicated in the figure.



(4) Then solder leads **B** and **C**.



PARTS LIST

CAUTION

- The parts identified by the ⚠ symbol are important for the safety. Whenever replacing these parts, be sure to use specified ones to secure the safety .
- The parts not indicated in this Parts List and those which are filled with lines —— in the Parts No. columns will not be supplied.
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied.

ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
C R	Carbon Resistor	C CAP.	Ceramic Capacitor
F R	Fusible Resistor	E CAP.	Electrolytic Capacitor
P R	Plate Resistor	M CAP.	Mylar Capacitor
V R	Variable Resistor	HV CAP.	High Voltage Capacitor
HV R	High Voltage Resistor	MF CAP.	Metalized Film Capacitor
MF R	Metal Film Resistor	MM CAP.	Metalized Mylar Capacitor
MG R	Metal Glazed Resistor	MP CAP.	Metalized Polystyrol Capacitor
MP R	Metal Plate Resistor	PP CAP.	Polypropylene Capacitor
OM R	Metal Oxide Film Resistor	PS CAP.	Polystyrol Capacitor
CMF R	Coating Metal Film Resistor	TF CAP.	Thin Film Capacitor
UNF R	Non-Flammable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH V R	Chip Variable Resistor	TAN. CAP.	Tantalum Capacitor
CH MG R	Chip Metal Glazed Resistor	CH C CAP.	Chip Ceramic Capacitor
COMP. R	Composition Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

TOLERANCES									
F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% -10%	+50% -10%	+80% -20%	+100% -0%

CONTENTS

USING P.W. BOARD & REMOTE CONTROL UNIT

Model / P.W.B ASS'Y	**AV-27D303/S**	**AV-27D203/S**	**AV-27D303/R**	**AV-27D203/R**
MAIN P.W.B	SFE-1001A-M2	←	SFE-1002A-M2	←
REMOTE CONTROL UNIT	RM-C252-1H	←	←	←

EXPLODED VIEW PARTS LIST (1)

AV-27D303/S

⚠	Ref.No.	Part No.	Part Name	Description
⚠	1	GQ30025-002A-A	CONTROL KNOB	
⚠	2	LC30191-004A-A	REMOCON LENS	
⚠	3	GQ30026-002A-A	POWER KNOB	
	4	CM48006-007-C	JVC MARK	
⚠	100	GQ10018-001B-A	FRONT CABINET ASSY	Inc.No.101
⚠	101	GQ30024-002A-A	DOOR	

AV-27D203/S

⚠	Ref.No.	Part No.	Part Name	Description
⚠	1	GQ30025-001A-A	CONTROL KNOB	
⚠	2	LC30191-004A-A	REMOCON LENS	
⚠	3	GQ30026-001A-A	POWER KNOB	
	4	CM48006-006-C	JVC MARK	
⚠	100	GQ10018-002B-A	FRONT CABINET ASSY	Inc.No.101
⚠	101	GQ30024-001A-A	DOOR	

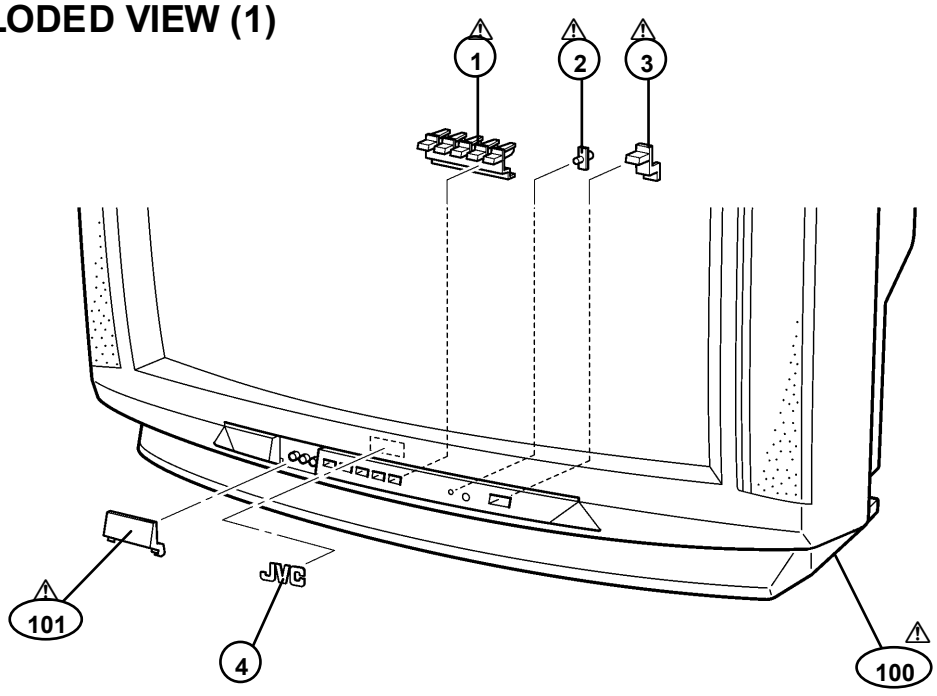
AV-27D303/R

⚠	Ref.No.	Part No.	Part Name	Description
⚠	1	GQ30025-002A-A	CONTROL KNOB	
⚠	2	LC30191-004A-A	REMOCON LENS	
⚠	3	GQ30026-002A-A	POWER KNOB	
	4	CM48006-007-C	JVC MARK	
⚠	100	GQ10018-001B-A	FRONT CABINET ASSY	Inc.No.101
⚠	101	GQ30024-002A-A	DOOR	

AV-27D203/R

⚠	Ref.No.	Part No.	Part Name	Description
⚠	1	GQ30025-001A-A	CONTROL KNOB	
⚠	2	LC30191-004A-A	REMOCON LENS	
⚠	3	GQ30026-001A-A	POWER KNOB	
	4	CM48006-006-C	JVC MARK	
⚠	100	GQ10018-002B-A	FRONT CABINET ASSY	Inc.No.101
⚠	101	GQ30024-001A-A	DOOR	

EXPLODED VIEW (1)



EXPLODED VIEW PARTS LIST (2)

AV-27D303/S

⚠	Ref.No.	Part No.	Part Name	Description
⚠	V01	A68QDN891X001	ITC TUBE(C)	Inc.DY,PC MAGNET,WEDGE
⚠	L01	CE41329-00DJB	DEG COIL	
⚠	T1521	QQH0129-001	H.V.TRANSF.	
	5	CHGB0016-0C	BRAIDED WIRE	
	6	CHGB0015-0B	BRAIDED WIRE (SUB)	
⚠	7	CEBSS09D-03KJ2	SPEAKER	(×2)SP01,02
⚠	8	CM48144-001-A	PWB STOPPER	
⚠	9	GQ10017-001B-A	REAR COVER	
⚠	10	LC20106-001D-A	POWER CORD CLAMP	
⚠	11	QMPD390-200-JS	POWER CORD	or QMPD200-200-JC Within MAIN PWB (CN10PW)
	12	QYSBSFG4016Z	TAPPING SCREW	(×11)
	13	QYSBSB3010Z	TAPPING SCREW	(×4)
⚠	14	GQ30032-001A-A	RATING LABEL	
⚠	15	GQ30034-001B-A	WARNING LABEL	

AV-27D203/S

⚠	Ref.No.	Part No.	Part Name	Description
⚠	V01	A68QDN891X001	ITC TUBE(C)	Inc.DY,PC MAGNET,WEDGE
⚠	L01	CE41329-00DJB	DEG COIL	
⚠	T1521	QQH0129-001	H.V.TRANSF.	
	5	CHGB0016-0C	BRAIDED WIRE	
	6	CHGB0015-0B	BRAIDED WIRE (SUB)	
⚠	7	CEBSS09D-03KJ2	SPEAKER	(×2)SP01,02
⚠	8	CM48144-001-A	PWB STOPPER	
⚠	9	GQ10017-001B-A	REAR COVER	
⚠	10	LC20106-001D-A	POWER CORD CLAMP	
⚠	11	QMPD390-200-JS	POWER CORD	or QMPD200-200-JC Within MAIN PWB (CN10PW)
	12	QYSBSFG4016Z	TAPPING SCREW	(×11)
	13	QYSBSB3010Z	TAPPING SCREW	(×4)
⚠	14	GQ30032-001A-A	RATING LABEL	
⚠	15	GQ30034-001B-A	WARNING LABEL	

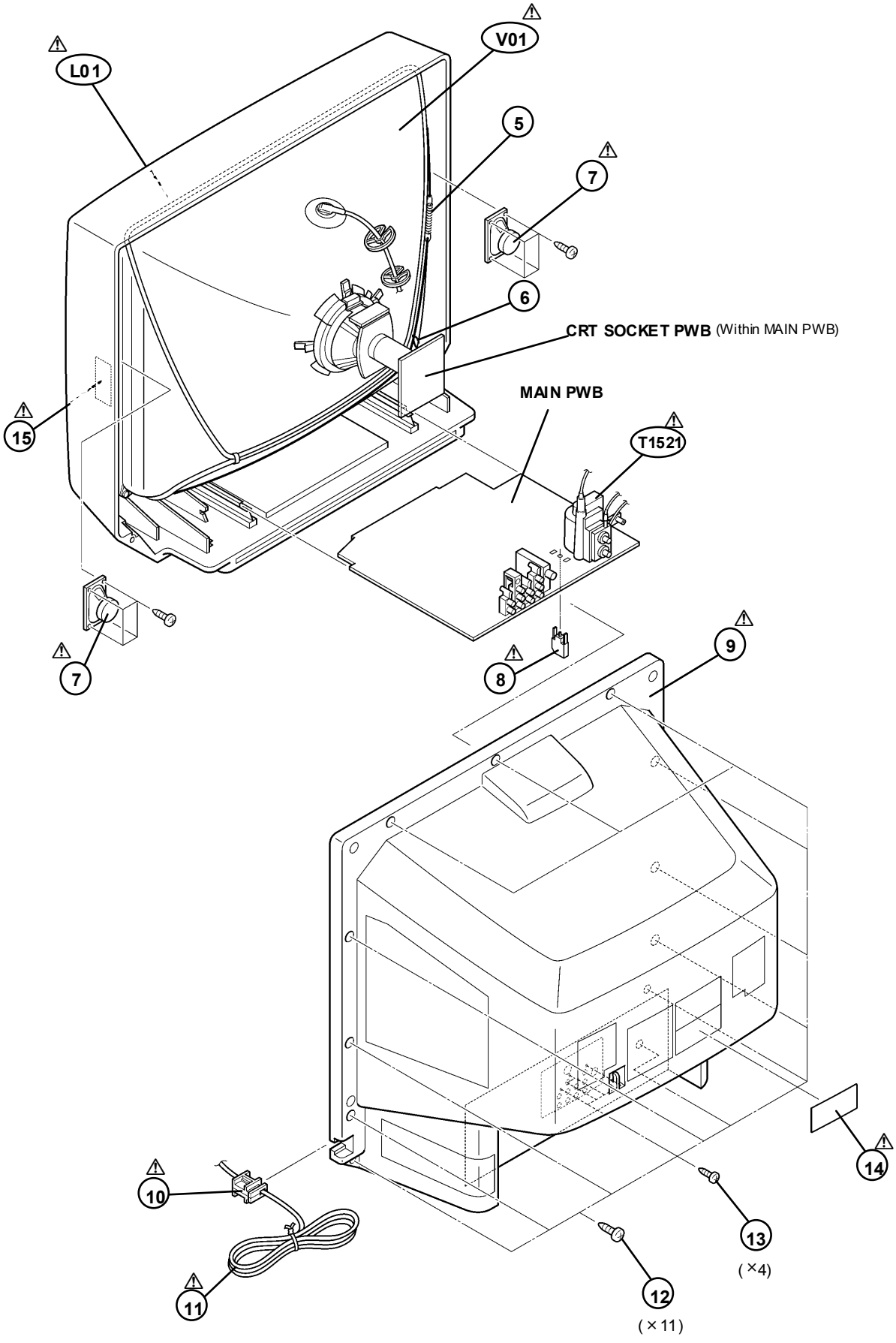
AV-27D303/R

⚠	Ref.No.	Part No.	Part Name	Description
⚠	V01	A68ADT25X01	ITC TUBE(C)	Inc.DY,PC MAGNET,WEDGE
⚠	L01	CE41329-00DJB	DEG COIL	
⚠	T1521	QQH0129-001	H.V.TRANSF.	
	5	CHGB0016-0C	BRAIDED WIRE	
	6	CHGB0015-0B	BRAIDED WIRE (SUB)	
⚠	7	CEBSS09D-03KJ2	SPEAKER	(×2)SP01,02
⚠	8	CM48144-001-A	PWB STOPPER	
⚠	9	GQ10017-001B-A	REAR COVER	
⚠	10	LC20106-001D-A	POWER CORD CLAMP	
⚠	11	QMPD390-200-JS	POWER CORD	or QMPD200-200-JC Within MAIN PWB (CN10PW)
	12	QYSBSFG4016Z	TAPPING SCREW	(×11)
	13	QYSBSB3010Z	TAPPING SCREW	(×4)
⚠	14	GQ30032-001A-A	RATING LABEL	
⚠	15	GQ30034-001B-A	WARNING LABEL	

AV-27D203/R

⚠	Ref.No.	Part No.	Part Name	Description
⚠	V01	A68ADT25X01	ITC TUBE(C)	Inc.DY,PC MAGNET,WEDGE
⚠	L01	CE41329-00DJB	DEG COIL	
⚠	T1521	QQH0129-001	H.V.TRANSF.	
	5	CHGB0016-0C	BRAIDED WIRE	
	6	CHGB0015-0B	BRAIDED WIRE (SUB)	
⚠	7	CEBSS09D-03KJ2	SPEAKER	(×2) SP01,02
⚠	8	CM48144-001-A	PWB STOPPER	
⚠	9	GQ10017-001B-A	REAR COVER	
⚠	10	LC20106-001D-A	POWER CORD CLAMP	
⚠	11	QMPD390-200-JS	POWER CORD	or QMPD200-200-JC Within MAIN PWB (CN10PW)
	12	QYSBSFG4016Z	TAPPING SCREW	(×11)
	13	QYSBSB3010Z	TAPPING SCREW	(×4)
⚠	14	GQ30032-001A-A	RATING LABEL	
⚠	15	GQ30034-001B-A	WARNING LABEL	

EXPLODED VIEW (2)



AV-27D303/S / AV-27D203/S

PRINTED WIRING BOARD PARTS LIST

MAIN P.W. BOARD ASS'Y (SFE-1001A-M2)

RESISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	R1003-04	NRSA63J-221X	MG R	220Ω 1/16W J
	R1005	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1006	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1008	NRSA63J-820X	MG R	82Ω 1/16W J
	R1101	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1102	NRSA63J-182X	MG R	1.8kΩ 1/16W J
	R1103	QRE121J-101Y	C R	100Ω 1/2W J
	R1104	NRSA63J-180X	MG R	18Ω 1/16W J
	R1105	NRSA63J-270X	MG R	27Ω 1/16W J
	R1111-12	NRSA63J-154X	MG R	150kΩ 1/16W J
	R1113	NRSA63J-101X	MG R	100Ω 1/16W J
	R1115	NRSA63J-101X	MG R	100Ω 1/16W J
	R1116	NRSA63J-680X	MG R	68Ω 1/16W J
	R1117	NRSA63J-273X	MG R	27kΩ 1/16W J
	R1131	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1132	NRSA63J-221X	MG R	220Ω 1/16W J
	R1133	NRSA63J-821X	MG R	820Ω 1/16W J
	R1134	NRSA63J-681X	MG R	680Ω 1/16W J
	R1135	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1161	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1163	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1164	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1165	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1166	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1167	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1168	NRSA63J-101X	MG R	100Ω 1/16W J
	R1169	NRSA63J-561X	MG R	560Ω 1/16W J
	R1171	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1201	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1227	NRSA63J-104X	MG R	100kΩ 1/16W J
	R1251	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1252	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1253	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1254	NRSA63J-181X	MG R	180Ω 1/16W J
	R1255-56	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R1257	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1261-63	NRSA63J-101X	MG R	100Ω 1/16W J
	R1264	NRSA63J-821X	MG R	820Ω 1/16W J
	R1280	QRE141J-102Y	C R	1kΩ 1/4W J
	R1282	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1283	NRSA63J-821X	MG R	820Ω 1/16W J
	R1285	NRSA63J-331X	MG R	330Ω 1/16W J
	R1286-87	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1288	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1289	QRE141J-102Y	C R	1kΩ 1/4W J
	R1290	QRE141J-102Y	C R	1kΩ 1/4W J
	R1292	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1293	NRSA63J-471X	MG R	470Ω 1/16W J
	R1295	NRSA63J-331X	MG R	330Ω 1/16W J
	R1296-97	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1298	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1299	QRE141J-102Y	C R	1kΩ 1/4W J
	R1301	NRSA63J-151X	MG R	150Ω 1/16W J
	R1302	QRL029J-123	OM R	12kΩ 2W J
	R1303	QRZ0111-152	C R	1.5kΩ 1/2W K
	R1304	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1305	NRSA63J-331X	MG R	330Ω 1/16W J
	R1306	NRSA63J-101X	MG R	100Ω 1/16W J
	R1311	NRSA63J-151X	MG R	150Ω 1/16W J
	R1312	QRL029J-123	OM R	12kΩ 2W J
	R1313	QRZ0111-152	C R	1.5kΩ 1/2W K
	R1314	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1315	NRSA63J-331X	MG R	330Ω 1/16W J
	R1316	NRSA63J-101X	MG R	100Ω 1/16W J
	R1321	NRSA63J-151X	MG R	150Ω 1/16W J
	R1322	QRL029J-123	OM R	12kΩ 2W J

RESISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	R1323	QRZ0111-152	C R	1.5kΩ 1/2W K
	R1324	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1325	NRSA63J-331X	MG R	330Ω 1/16W J
	R1326	NRSA63J-101X	MG R	100Ω 1/16W J
	R1354	NRSA63J-331X	MG R	330Ω 1/16W J
	R1356	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1359	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1360	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1364-66	NRSA63J-101X	MG R	100Ω 1/16W J
	R1401	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1402	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1403	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1405	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1407-08	QRE121J-681Y	C R	680Ω 1/2W J
	R1409	QRX01GJ-1R0	MF R	1.0Ω 1W J
	R1411	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1412	NRSA63J-153X	MG R	15kΩ 1/16W J
	R1414	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1416	QRE121J-102Y	C R	1kΩ 1/2W J
	R1501	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1502	NRSA63J-681X	MG R	680Ω 1/16W J
	R1504	NRSA63J-392X	MG R	3.9kΩ 1/16W J
	R1505	NRSA63J-154X	MG R	150kΩ 1/16W J
	R1506	NRSA63J-471X	MG R	470Ω 1/16W J
	R1507	NRSA63J-561X	MG R	560Ω 1/16W J
	R1508	NRSA63J-101X	MG R	100Ω 1/16W J
	R1509	NRSA63J-271X	MG R	270Ω 1/16W J
	R1510	QRE121J-103Y	C R	10kΩ 1/2W J
	R1511-12	QRG029J-182	OM R	1.8kΩ 2W J
	R1521	QRE121J-220Y	C R	22Ω 1/2W J
	R1522	QRE121J-681Y	C R	680Ω 1/2W J
	R1523	QRL039J-152	OM R	1.5kΩ 3W J
	R1524	QRE121J-224Y	C R	220kΩ 1/2W J
	R1525	QRE121J-184Y	C R	180kΩ 1/2W J
	R1526	QRK129J-150	C R	15Ω 1/2W J
⚠	R1527	QRX01GJ-1R0	MF R	1.0Ω 1W J
	R1528	QRE121J-472Y	C R	4.7kΩ 1/2W J
	R1529	QRK126J-4R7X	C R	4.7Ω 1/2W J
⚠	R1530	QRX029J-1R5	MF R	1.5Ω 2W J
⚠	R1531	NRZ0032-7151X	MF R	7.15kΩ 1/10W± 0.5%
⚠	R1533	NRZ0032-2941X	MF R	2.94kΩ 1/10W± 0.5%
	R1541	QRE121J-683Y	C R	68kΩ 1/2W J
	R1601-04	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1605	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1607	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1609	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1614	QRL039J-100	OM R	10Ω 3W J
	R1615-16	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1617-18	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1619-20	NRSA63J-471X	MG R	470Ω 1/16W J
	R1621	QRE121J-4R7Y	C R	4.7Ω 1/2W J
	R1622	QRE121J-4R7Y	C R	4.7Ω 1/2W J
	R1625	NRSA63J-333X	MG R	33kΩ 1/16W J
	R1627	NRSA63J-101X	MG R	100Ω 1/16W J
	R1651-52	NRSA63J-101X	MG R	100Ω 1/16W J
	R1653	NRSA63J-105X	MG R	1MΩ 1/16W J
	R1654	NRSA63J-104X	MG R	100kΩ 1/16W J
	R1655	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1656	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1657	NRSA63F-623X	MG R	62kΩ 1/16W F
	R1658	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1659	NRSA63J-302X	MG R	3kΩ 1/16W J
	R1661	NRSA63J-392X	MG R	3.9kΩ 1/16W J
	R1662-63	NRSA63J-681X	MG R	680Ω 1/16W J
	R1664-65	NRSA63J-101X	MG R	100Ω 1/16W J
	R1681-82	NRSA63J-681X	MG R	680Ω 1/16W J

AV-27D303/S / AV-27D203/S

RESISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	R1683-86	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1687-88	NRSA63J-221X	MG R	220Ω 1/16W J
	R1691-92	NRSA63J-823X	MG R	82kΩ 1/16W J
	R1701-02	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1703	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1704-06	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1707	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1708-09	NRSA63J-101X	MG R	100Ω 1/16W J
	R1714	NRSA63J-823X	MG R	82kΩ 1/16W J
	R1718	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1720	QRJ149J-1R0	C R	1.0Ω 1/4W J
	R1721	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1731-32	NRSA63J-101X	MG R	100Ω 1/16W J
	R1733-34	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1739	NRSA63J-272X	MG R	2.7kΩ 1/16W J
	R1740	NRSA63J-101X	MG R	100Ω 1/16W J
	R1751-52	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1753	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R1754	NRSA63J-272X	MG R	2.7kΩ 1/16W J
	R1755	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1756	NRSA63J-122X	MG R	1.2kΩ 1/16W J
	R1757-58	NRSA63J-101X	MG R	100Ω 1/16W J
	R1764-67	NRSA63J-471X	MG R	470Ω 1/16W J
	R1768	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1769	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1770	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1771	NRSA63J-153X	MG R	15kΩ 1/16W J
	R1772-75	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1776-77	NRSA63J-101X	MG R	100Ω 1/16W J
	R1778	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1801	NRSA63J-680X	MG R	68Ω 1/16W J
	R1802-04	NRSA63J-750X	MG R	75Ω 1/16W J
	R1805	NRSA63J-101X	MG R	100Ω 1/16W J
	R1821	NRSA63J-124X	MG R	120kΩ 1/16W J
	R1831-33	NRSA63J-750X	MG R	75Ω 1/16W J
	R1834-36	NRSA63J-101X	MG R	100Ω 1/16W J
	R1851-54	NRSA63J-101X	MG R	100Ω 1/16W J
	R1855	NRSA63J-153X	MG R	15kΩ 1/16W J
	R1856	NRSA63J-101X	MG R	100Ω 1/16W J
	R1857	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1858-61	NRSA63J-101X	MG R	100Ω 1/16W J
	R1862	NRSA63J-104X	MG R	100kΩ 1/16W J
	R1863	NRSA63J-473X	MG R	47kΩ 1/16W J
⚠	R1901	QRF074K-R47	UNF R	0.47Ω 7W K
	R1902-03	QRE121J-473Y	C R	47kΩ 1/2W J
⚠	R1904-05	QRT029J-R22	MF R	0.22Ω 2W J
	R1906	QRE121J-2R2Y	C R	2.2Ω 1/2W J
	R1907	QRE121J-472Y	C R	4.7kΩ 1/2W J
	R1908	QRK126J-681X	C R	680Ω 1/2W J
	R1910	QRE121J-684Y	C R	680kΩ 1/2W J
	R1911	QRG01GJ-470	OM R	47Ω 1W J
⚠	R1921	QRE121J-100Y	MF R	10Ω 1/2W J
	R1922	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1923	NRSA63J-473X	MG R	47kΩ 1/16W J
⚠	R1924	QRX01GJ-1R0	MF R	1.0Ω 1W J
⚠	R1925	QRX01GJ-1R0	MF R	1.0Ω 1W J
⚠	R1926	QRT029J-1R2	MF R	1.2Ω 2W J
⚠	R1927	QRT029J-1R2	MF R	1.2Ω 2W J
	R1928	QRE121J-272Y	C R	2.7kΩ 1/2W J
	R1929	QRE121J-223Y	C R	22kΩ 1/2W J
	R1930	QRE121J-473Y	C R	47kΩ 1/2W J
	R1932-33	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1934	NRSA63J-273X	MG R	27kΩ 1/16W J
	R1935	NRSA63J-333X	MG R	33kΩ 1/16W J
	R1936	QRE121J-103Y	C R	10kΩ 1/2W J
	R1938-39	QRE121J-103Y	C R	10kΩ 1/2W J
	R1941	QRG029J-180	OM R	18 Ω 2W J
	R1942	QRE121J-5R6Y	C R	5.6Ω 1/2W J
	R1943	QRE121J-820Y	C R	82Ω 1/2W J
	R1991	QRZ9041-275	C R	2.7MΩ 1/2W K

CAPACITOR

⚠	Symbol No.	Part No.	Part Name	Description
	C1001	QETN1HM-475Z	E CAP.	4.7μF 50V M
	C1002	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1003	QETN1EM-476Z	E CAP.	47μF 25V M
	C1004	QETN1AM-227Z	E CAP.	220μF 10V M
	C1005	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1101-02	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1104-05	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1106	QETN1EM-476Z	E CAP.	47μF 25V M
	C1107	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1113-14	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1116	NCB31CK-224X	C CAP.	0.22μF 16V K
	C1117	QETN1EM-476Z	E CAP.	47μF 25V M
	C1118	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1119	NDC31HJ-681X	C CAP.	680pF 50V J
	C1120	QETN1HM-474Z	E CAP.	0.47μF 50V M
	C1124	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1131	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1161-62	QETN1HM-106Z	E CAP.	10μF 50V M
	C1163-64	NDC31HJ-470X	C CAP.	47pF 50V J
	C1165-66	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1202	QETN1HM-105Z	E CAP.	1μF 50V M
	C1203	NCB31HK-152X	C CAP.	1500pF 50V K
	C1221	QETN1HM-106Z	E CAP.	10μF 50V M
	C1222	NCB31HK-104X	C CAP.	0.1μF 50V K
	C1237	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1241	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1243	QETN1EM-476Z	E CAP.	47μF 25V M
	C1244	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1247	QETN1HM-225Z	E CAP.	2.2μF 50V M
	C1252	NDC31HJ-101X	C CAP.	100pF 50V J
	C1253	NDC31HJ-470X	C CAP.	47pF 50V J
	C1254	NDC31HJ-181X	C CAP.	180pF 50V J
	C1261	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1262	QETN1EM-476Z	E CAP.	47μF 25V M
	C1263-64	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1265	QETN1HM-474Z	E CAP.	0.47μF 50V M
	C1266-67	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1268	QETN1EM-476Z	E CAP.	47μF 25V M
	C1269	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1270	QETN1EM-476Z	E CAP.	47μF 25V M
	C1272-73	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1274	NDC31HJ-181X	C CAP.	180pF 50V J
	C1275	QETN1EM-476Z	E CAP.	47μF 25V M
	C1276-78	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1283	NDC31HJ-330X	C CAP.	33pF 50V J
	C1285	QETN1EM-476Z	E CAP.	47μF 25V M
	C1293	NDC31HJ-150X	C CAP.	15pF 50V J
	C1295	QFLC1HJ-103Z	M CAP.	0.01μF 50V J
	C1302	NDC31HJ-331X	C CAP.	330pF 50V J
	C1312	NDC31HJ-271X	C CAP.	270pF 50V J
	C1322	NDC31HJ-271X	C CAP.	270pF 50V J
	C1341	QETN1EM-476Z	E CAP.	47μF 25V M
⚠	C1343	QCZ0121-102	C CAP.	1000pF 3kV Z
	C1352	QETN1EM-476Z	E CAP.	47μF 25V M
	C1354	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1361	QETN1EM-476Z	E CAP.	47μF 25V M
	C1362	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1401	QFV71HJ-474Z	MF CAP.	0.47μF 50V J
	C1402	NCB31HK-102X	C CAP.	1000pF 50V K
	C1403	QENC1CM-106Z	E CAP.	10μF 16V M
	C1404	NCB31HK-222X	C CAP.	2200pF 50V K
	C1405	QETN1HM-106Z	E CAP.	10μF 50V M
	C1406	NCB31HK-102X	C CAP.	1000pF 50V K
	C1407	QETN1VM-107Z	E CAP.	100μF 35V M
	C1408	QCS32HJ-100Z	C CAP.	10pF 500V J
	C1409-10	QFLC2AK-104Z	M CAP.	0.1μF 100V K
	C1411	QETM1VM-228	E CAP.	2200μF 35V M
	C1412	QETN1HM-225Z	E CAP.	2.2μF 50V M
	C1501	QETN1EM-476Z	E CAP.	47μF 25V M
	C1502-03	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1504	QETN1HM-225Z	E CAP.	2.2μF 50V M
	C1505	NCB31AK-474X	C CAP.	0.47μF 10V K

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⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C1506	QETN1EM-476Z	E CAP.	47μF 25V M
	C1507	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1508	QCB32HK-151Z	C CAP.	150pF 500V K
	C1509	QCB32HK-331Z	C CAP.	330pF 500V K
	C1510	QETN2EM-225Z	E CAP.	2.2μF 250V M
⚠	C1522	QFZ0198-133	MPP CAP.	0.013μF1.5kVH±3%
⚠	C1523	QFZ0197-624	MPP CAP.	0.62μF 250V J
	C1524	QCB32HK-561Z	C CAP.	560pF 500V K
	C1525	QEZ0203-107	E CAP.	100μF 160V M
	C1526	QFLC1HJ-823Z	M CAP.	0.082μF 50V J
	C1527	QETN2EM-106Z	E CAP.	10μF 250V M
	C1528	QETN1VM-477Z	E CAP.	470μF 35V M
	C1529	QETN1VM-476Z	E CAP.	47μF 35V M
	C1530	QFLC2AJ-103Z	M CAP.	0.01μF 100V J
	C1601-02	NCF31AZ-105X	C CAP.	1μF 10V Z
	C1603-04	NCB31HK-332X	C CAP.	3300pF 50V K
	C1605-06	NCB31HK-333X	CHIP CAP.	0.033μF 50V K
	C1607-08	QETN1HM-106Z	E CAP.	10μF 50V M
	C1609	QETN1EM-476Z	E CAP.	47μF 25V M
	C1610	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1611-12	QETN1HM-106Z	E CAP.	10μF 50V M
	C1614	QETN1CM-477Z	E CAP.	470μF 16V M
	C1616	QETN1HM-106Z	E CAP.	10μF 50V M
	C1617	QETN1CM-227Z	E CAP.	220μF 16V M
	C1618	QETN1CM-107Z	E CAP.	100μF 16V M
	C1619	QETN1CM-477Z	E CAP.	470μF 16V M
	C1620	NCF31CZ-104X	C CAP.	0.1μF 16V Z
	C1622	QETN1HM-106Z	E CAP.	10μF 50V M
	C1623	QETN1CM-227Z	E CAP.	220μF 16V M
	C1624	QETN1HM-107Z	E CAP.	100μF 50V M
	C1625	QETN1CM-477Z	E CAP.	470μF 16V M
	C1626	NCF31CZ-104X	C CAP.	0.1μF 16V Z
	C1627	QETN1EM-476Z	E CAP.	47μF 25V M
	C1651	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1652	NCB31HK-104X	C CAP.	0.1μF 50V K
	C1653	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1654	NCB31HK-562X	C CAP.	5600pF 50V K
	C1655	NCB31HK-123X	C CAP.	0.012μF 50V K
	C1656	QETN1HM-105Z	E CAP.	1μF 50V M
	C1657-58	QETN1HM-106Z	E CAP.	10μF 50V M
	C1659	QETN1HM-475Z	E CAP.	4.7μF 50V M
	C1660	QETN1EM-476Z	E CAP.	47μF 25V M
	C1661	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1662	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1663	QETN1HM-475Z	E CAP.	4.7μF 50V M
	C1664	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1665	NCB31HK-272X	C CAP.	2700pF 50V K
	C1666	NCB31HK-473X	C CAP.	0.047μF 50V K
	C1667	QETN1HM-335Z	E CAP.	3.3μF 50V M
	C1668	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1669	QETN1HM-106Z	E CAP.	10μF 50V M
	C1670	QETN1HM-105Z	E CAP.	1μF 50V M
	C1671-72	QETN1HM-106Z	E CAP.	10μF 50V M
	C1673	NCB31HK-223X	C CAP.	0.022μF 50V K
	C1674	NCB31HK-472X	C CAP.	4700pF 50V K
	C1675	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1676	NCB31HK-104X	C CAP.	0.1μF 50V K
	C1677	NCB31HK-472X	C CAP.	4700pF 50V K
	C1681-88	QETN1HM-106Z	E CAP.	10μF 50V M
	C1701	NCB31HK-102X	C CAP.	1000pF 50V K
	C1702-03	QETN1HM-106Z	E CAP.	10μF 50V M
	C1704	QETN1EM-476Z	E CAP.	47μF 25V M
	C1705	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1708-09	NDC31HJ-220X	C CAP.	22pF 50V J
	C1711	QETN1EM-476Z	E CAP.	47μF 25V M
	C1712	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1716	QETN1HM-106Z	E CAP.	10μF 50V M
	C1751	QETN1EM-476Z	E CAP.	47μF 25V M
	C1801-02	QETN1HM-106Z	E CAP.	10μF 50V M
	C1803	QETN1HM-105Z	E CAP.	1μF 50V M
	C1804	QETN1HM-106Z	E CAP.	10μF 50V M
	C1807	NCB31HK-103X	C CAP.	0.01μF 50V K

⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C1815	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1831-33	NCB31HK-104X	C CAP.	0.1μF 50V K
	C1834	QETN1HM-106Z	E CAP.	10μF 50V M
	C1851-52	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1853	QETN1HM-106Z	E CAP.	10μF 50V M
	C1854-56	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1857	QETN1HM-106Z	E CAP.	10μF 50V M
	C1858-60	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1861	QETN1EM-476Z	E CAP.	47μF 25V M
	C1862	QETN1HM-106Z	E CAP.	10μF 50V M
⚠	C1901	QFZ9072-104	MF CAP.	0.1μFAC275V K
⚠	C1902	QFZ9072-104	MF CAP.	0.1μFAC275V K
	C1903	QEZ0169-477	E CAP.	470μF 200V M
⚠	C1904	QCZ9054-102	C CAP.	1000pFAC250V Z
⚠	C1905	QCZ9054-102	C CAP.	1000pFAC250V Z
	C1907	QETN1HM-476Z	E CAP.	47μF 50V M
	C1908	QCZ0340-102	C CAP.	1000pF 2kV K
	C1909	NDC31HJ-102X	C CAP.	1000pF 50V J
	C1910	NDC31HJ-471X	C CAP.	470pF 50V J
⚠	C1911	QFP32GJ-103Z	PP CAP.	0.01μF 400V J
	C1921	QETN1EM-477Z	E CAP.	470μF 25V M
	C1922	QETN1CM-107Z	E CAP.	100μF 16V M
	C1923	QEZ0203-107	E CAP.	100μF 160V M
	C1924	QETN2CM-476Z	E CAP.	47μF 160V M
	C1925	QETN1CM-477Z	E CAP.	470μF 16V M
	C1926	QETN1CM-107Z	E CAP.	100μF 16V M
	C1927	QETN1CM-477Z	E CAP.	470μF 16V M
	C1929	QCZ0340-102	C CAP.	1000pF 2kV K
	C1930-31	QCB32HK-102Z	C CAP.	1000pF 500V K
	C1932	QETN0JM-107Z	E CAP.	100μF 6.3V M
	C1933	QETN1VM-476Z	E CAP.	47μF 35V M
	C1935	QETN1CM-476Z	E CAP.	47μF 16V M
	C1940	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1941-42	QETN1CM-107Z	E CAP.	100μF 16V M
	C1943	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1944	QETN1CM-107Z	E CAP.	100μF 16V M
	C1945	NCB31HK-103X	C CAP.	0.01μF 50V K
⚠	C1991	QCZ9074-103	C CAP.	0.01μFAC250V M
⚠	C1992	QCZ9074-103	C CAP.	0.01μFAC250V M
	TRANSFORMER			
	T1111	QQR0907-001	I.F.TRANSFOMER	
	T1501	CE42034-002	H.DRIVE TRANSF.	
⚠	T1521	QQH0129-001	H.V.TRANSF.	
⚠	T1901	QQT0355-001	POWER TRANSF.	
⚠	T1921	QQS0158-001	SWITCH.TRANSF.	
	COIL			
	L1101	QQLZ014-R39	PEAKING COIL	
	L1131	QQL244K-220Z	PEAKING COIL	
	L1161	QQL244K-220Z	PEAKING COIL	
	L1251	QQL244K-4R7Z	COIL	4.7μH K
	L1281	QQL244K-150Z	COIL	15μH K
	L1291	QQL244K-150Z	COIL	15μH K
	L1341	QQL03BJ-390Z	COIL	39μH J
	L1521	QQR1027-004	LINE FILTER	
	L1921-22	QQL26AK-470Z	COIL	47μH K
	DIODE			
	D1352	MTZJ9.1C-T2	ZENER DIODE	
	D1353	1SS133-T2	SI.DIODE	
	D1365	1SS133-T2	SI.DIODE	
	D1366	1SS133-T2	SI.DIODE	
	D1367	1SS133-T2	SI.DIODE	
	D1368	1SS133-T2	SI.DIODE	
	D1369	1SS133-T2	SI.DIODE	
	D1370	1SS133-T2	SI.DIODE	
	D1401	1SR35-400A-T2	SI.DIODE	
	D1402	MTZJ75-T2	ZENER DIODE	
	D1501	MTZJ3.3A-T2	ZENER DIODE	

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DIODE

⚠	Symbol No.	Part No.	Part Name	Description
	D1521	1SR35-400A-T2	SI.DIODE	
	D1522	RH1S-T3	SI.DIODE	
	D1523	1SR35-400A-T2	SI.DIODE	
	D1524	RGP10J-5025-T3	SI.DIODE	
	D1525	MTZJ5.6A-T2	ZENER DIODE	
	D1526	MA4068N/Z1/-T2	ZENER DIODE	
	D1661	MTZJ9.1C-T2	ZENER DIODE	
	D1681-88	MTZJ9.1C-T2	ZENER DIODE	
	D1705	1SS133-T2	SI.DIODE	
	D1751	SLR-342VR3F	L.E.D.	
	D1801-04	MTZJ9.1C-T2	ZENER DIODE	
	D1807	MTZJ9.1C-T2	ZENER DIODE	
	D1831-34	MTZJ9.1C-T2	ZENER DIODE	
⚠	D1901	GSIB460-S1	DIODE	
	D1902	RGP10J-5025-T3	SI.DIODE	
	D1903	RGP10J-5025-T3	SI.DIODE	
	D1904	RGP10J-5025-T3	SI.DIODE	
	D1905	SARS01-T2	SI.DIODE	
	D1908	MTZJ15C-T2	ZENER DIODE	
	D1921-24	1SR35-400A-T2	SI.DIODE	
	D1925	1SS133-T2	SI.DIODE	
	D1926	RU3AM-LFC4	SI.DIODE	
	D1927	RU3YX-LFC4	SI.DIODE	
	D1928	RU3YX-LFC4	SI.DIODE	
	D1930	1SS133-T2	SI.DIODE	
	D1931	1SS133-T2	SI.DIODE	
	D1932	MTZJ33B-T2	ZENER DIODE	
	D1933	1N4002G-T2	SI.DIODE	

TRANSISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	Q1001	DTC124EKA-X	DIGI.TRANSISTOR	
	Q1101	2SC5083/L-P/-T	SI.TRANSISTOR	
	Q1131	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1161	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1251-52	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1281	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1282	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1283	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1291	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1292	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1293	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1301	2SC4544-LB	SI.TRANSISTOR	
	Q1311	2SC4544-LB	SI.TRANSISTOR	
	Q1321	2SC4544-LB	SI.TRANSISTOR	
	Q1352	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1501	2SC4212/Z1/	SI.TRANSISTOR	
⚠	Q1521	2SD2634-YD	SI.TRANSISTOR	H.OUT
	Q1602	DTC124EKA-X	DIGI.TRANSISTOR	
	Q1681	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1682	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1683	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1684	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1701	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1751	DTA124EKA-X	DIGI.TRANSISTOR	
	Q1851	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1921	2SD1383K/AB/-X	SI.TRANSISTOR	
	Q1922	2SC2785/JH/-T	SI.TRANSISTOR	
	Q1923	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q1924	2SA1208/ST/Z1-T	SI.TRANSISTOR	

IC

⚠	Symbol No.	Part No.	Part Name	Description
	IC1101	M52342SP	I.C(MONO-ANA)	
	IC1201	TM8812CSANG3PF2	I.C(M)	
	IC1251	TC90A49P	I.C(DIGI-MOS)	
⚠	IC1421	AN5522	I.C(MONO-ANA)	
	IC1601	NJM2150AD	I.C(MONO-ANA)	
⚠	IC1602	LA4446	I.C(MONO-ANA)	
	IC1603	CXA2134Q-X	I.C(M)	
	IC1702	AT24C04-27D303	I.C	(SERVICE)
	IC1703	S-80840CNY-T	I.C(MONO-ANA)	
	IC1704	AN78L05-T	I.C(MONO-ANA)	
	IC1751	GP1UM281QK	IFR DETECT UNIT	
	IC1851	TA1218AN	I.C(MONO-ANA)	

IC

⚠	Symbol No.	Part No.	Part Name	Description
	IC1901	STR-G5624A/F8	I C	
	IC1921	AN7809F	I.C(MONO-ANA)	
	IC1922	AN7805F	I.C(MONO-ANA)	

OTHERS

⚠	Symbol No.	Part No.	Part Name	Description
		LC30190-001B-A	L.E.D.HOLDER	
	CF1001	QAX0349-001	CERAMIC FILTER	
	CF1131	QAX0639-001Z	CERAMIC FILTER	
	CF1161	QAX0642-001Z	CERAMIC FILTER	
⚠	CN10PW	QMPD390-200-JS	POWER CORD	or QMPD200-200-JC
⚠	F1901	QMF51N1-5R0-JS	FUSE	5.0A
	FC1901	CEMG002-001Z	FUSE CLIP	(x2)
	J1001	QNZ0454-001	PIN JACK	
	J1002	QNNG348-001	PIN JACK	
	J1003	QNNG349-002	PIN JACK	
	J1004	QNNG348-001	PIN JACK	
	J1005	CEMN065-001	PIN JACK	
	J1006	CEMN065-002	PIN JACK	
	J1007	CEMN072-003	PIN JACK	
	K1001	QQR0582-001Z	BEADS CORE	
	K1101	QQR0582-001Z	BEADS CORE	
	K1251	QQR0582-001Z	BEADS CORE	
	K1253-54	QQR0582-001Z	BEADS CORE	
	K1401	QQR0582-001Z	BEADS CORE	
	K1701-02	QQR0582-001Z	BEADS CORE	
	K1901-02	QQR0582-001Z	BEADS CORE	
	K1921-23	QQR0582-001Z	BEADS CORE	
⚠	LF1901	QQR0527-003	LINE FILTER	
⚠	RY1901	QSK0085-001	RELAY	
	S1401	QSL4A13-C02	LEVER SWITCH	
	S1751-56	QSW0619-003Z	PUSH SWITCH	POWER
	S1752	QSW0619-003Z	PUSH SWITCH	VOL+
	S1753	QSW0619-003Z	PUSH SWITCH	VOL-
	S1754	QSW0619-003Z	PUSH SWITCH	CH+
	S1755	QSW0619-003Z	PUSH SWITCH	CH-
	S1756	QSW0619-003Z	PUSH SWITCH	MENU
	SF1101	QAX0723-001	SAW FILTER	
⚠	SK1351	QNZ0537-001	C.R.T.SOCKET	
⚠	TH1901	QAD0129-3R0	P.THERMISTOR	
⚠	TU1001	QAU0275-001	TUNER	
⚠	VA1901	ERZV10V621CS	VARISTOR	
	W1602	QRX029J-3R3	MF R	3.3Ω 2W J
	W1603	QRE141J-101Y	C R	100Ω 1/4W J
	W1605	QRE141J-101Y	C R	100Ω 1/4W J
	X1701	QAX0717-001Z	CRYSTAL	

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PRINTED WIRING BOARD PARTS LIST

MAIN P.W. BOARD ASS'Y (SFE-1002A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R1003-04	NRSA63J-221X	MG R	220Ω 1/16W J
	R1005	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1006	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1008	NRSA63J-820X	MG R	82Ω 1/16W J
	R1101	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1102	NRSA63J-182X	MG R	1.8kΩ 1/16W J
	R1103	QRE121J-101Y	C R	100Ω 1/2W J
	R1104	NRSA63J-180X	MG R	18Ω 1/16W J
	R1105	NRSA63J-270X	MG R	27Ω 1/16W J
	R1111-12	NRSA63J-154X	MG R	150kΩ 1/16W J
	R1113	NRSA63J-101X	MG R	100Ω 1/16W J
	R1115	NRSA63J-101X	MG R	100Ω 1/16W J
	R1116	NRSA63J-680X	MG R	68Ω 1/16W J
	R1117	NRSA63J-273X	MG R	27kΩ 1/16W J
	R1131	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1132	NRSA63J-221X	MG R	220Ω 1/16W J
	R1133	NRSA63J-821X	MG R	820Ω 1/16W J
	R1134	NRSA63J-681X	MG R	680Ω 1/16W J
	R1135	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1161	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1163	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1164	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1165	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1166	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1167	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1168	NRSA63J-101X	MG R	100Ω 1/16W J
	R1169	NRSA63J-561X	MG R	560Ω 1/16W J
	R1171	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1201	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1227	NRSA63J-104X	MG R	100kΩ 1/16W J
	R1251	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1252	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1253	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1254	NRSA63J-181X	MG R	180Ω 1/16W J
	R1255-56	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R1257	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1261-63	NRSA63J-101X	MG R	100Ω 1/16W J
	R1264	NRSA63J-821X	MG R	820Ω 1/16W J
	R1280	QRE141J-102Y	C R	1kΩ 1/4W J
	R1282	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1283	NRSA63J-821X	MG R	820Ω 1/16W J
	R1285	NRSA63J-331X	MG R	330Ω 1/16W J
	R1286-87	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1288	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1289	QRE141J-102Y	C R	1kΩ 1/4W J
	R1290	QRE141J-102Y	C R	1kΩ 1/4W J
	R1292	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1293	NRSA63J-471X	MG R	470Ω 1/16W J
	R1295	NRSA63J-331X	MG R	330Ω 1/16W J
	R1296-97	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1298	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1299	QRE141J-102Y	C R	1kΩ 1/4W J
	R1301	NRSA63J-151X	MG R	150Ω 1/16W J
	R1302	QRL029J-123	OM R	12kΩ 2W J
	R1303	QRZ0111-152	C R	1.5kΩ 1/2W K
	R1304	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1305	NRSA63J-331X	MG R	330Ω 1/16W J
	R1306	NRSA63J-101X	MG R	100Ω 1/16W J
	R1311	NRSA63J-151X	MG R	150Ω 1/16W J
	R1312	QRL029J-123	OM R	12kΩ 2W J
	R1313	QRZ0111-152	C R	1.5kΩ 1/2W K
	R1314	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1315	NRSA63J-331X	MG R	330Ω 1/16W J
	R1316	NRSA63J-101X	MG R	100Ω 1/16W J
	R1321	NRSA63J-151X	MG R	150Ω 1/16W J

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R1322	QRL029J-123	OM R	12kΩ 2W J
	R1323	QRZ0111-152	C R	1.5kΩ 1/2W K
	R1324	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1325	NRSA63J-331X	MG R	330Ω 1/16W J
	R1326	NRSA63J-101X	MG R	100Ω 1/16W J
	R1354	NRSA63J-331X	MG R	330Ω 1/16W J
	R1356	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1359	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1360	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1364-66	NRSA63J-101X	MG R	100Ω 1/16W J
	R1401	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1402	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1403	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1405	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1407-08	QRE121J-681Y	C R	680Ω 1/2W J
	R1409	QRX01GJ-1R0	MF R	1.0Ω 1W J
	R1411	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1412	NRSA63J-153X	MG R	15kΩ 1/16W J
	R1414	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1416	QRE121J-102Y	C R	1kΩ 1/2W J
	R1501	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1502	NRSA63J-681X	MG R	680Ω 1/16W J
	R1504	NRSA63J-392X	MG R	3.9kΩ 1/16W J
	R1505	NRSA63J-154X	MG R	150kΩ 1/16W J
	R1506	NRSA63J-471X	MG R	470Ω 1/16W J
	R1507	NRSA63J-561X	MG R	560Ω 1/16W J
	R1508	NRSA63J-101X	MG R	100Ω 1/16W J
	R1509	NRSA63J-271X	MG R	270Ω 1/16W J
	R1510	QRE121J-103Y	C R	10kΩ 1/2W J
	R1511-12	QRG029J-182	OM R	1.8kΩ 2W J
	R1521	QRE121J-220Y	C R	22Ω 1/2W J
	R1522	QRE121J-681Y	C R	680Ω 1/2W J
	R1523	QRL039J-152	OM R	1.5kΩ 3W J
	R1524	QRE121J-224Y	C R	220kΩ 1/2W J
	R1525	QRE121J-184Y	C R	180kΩ 1/2W J
	R1526	QRK129J-150	C R	15Ω 1/2W J
⚠	R1527	QRX01GJ-1R0	MF R	1.0Ω 1W J
	R1528	QRE121J-472Y	C R	4.7kΩ 1/2W J
	R1529	QRK126J-4R7X	C R	4.7Ω 1/2W J
⚠	R1530	QRX029J-1R5	MF R	1.5Ω 2W J
⚠	R1531	NRZ0032-7151X	MF R	7.15kΩ 1/10W ± 0.5%
⚠	R1533	NRZ0032-2941X	MF R	2.94kΩ 1/10W ± 0.5%
	R1541	QRE121J-683Y	C R	68kΩ 1/2W J
	R1601-04	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1605	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1607	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1609	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1614	QRL039J-100	OM R	10Ω 3W J
	R1615-16	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1617-18	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1619-20	NRSA63J-471X	MG R	470Ω 1/16W J
	R1621	QRE121J-4R7Y	C R	4.7Ω 1/2W J
	R1622	QRE121J-4R7Y	C R	4.7Ω 1/2W J
	R1625	NRSA63J-333X	MG R	33kΩ 1/16W J
	R1627	NRSA63J-101X	MG R	100Ω 1/16W J
	R1651-52	NRSA63J-101X	MG R	100Ω 1/16W J
	R1653	NRSA63J-105X	MG R	1MΩ 1/16W J
	R1654	NRSA63J-104X	MG R	100kΩ 1/16W J
	R1655	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1656	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1657	NRSA63F-623X	MG R	62kΩ 1/16W F
	R1658	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1659	NRSA63J-302X	MG R	3kΩ 1/16W J
	R1661	NRSA63J-392X	MG R	3.9kΩ 1/16W J
	R1662-63	NRSA63J-681X	MG R	680Ω 1/16W J

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RESISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	R1664-65	NRSA63J-101X	MG R	100Ω 1/16W J
	R1681-82	NRSA63J-681X	MG R	680Ω 1/16W J
	R1683-86	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1687-88	NRSA63J-221X	MG R	220Ω 1/16W J
	R1691-92	NRSA63J-823X	MG R	82kΩ 1/16W J
	R1701-02	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1703	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1704-06	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1707	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1708-09	NRSA63J-101X	MG R	100Ω 1/16W J
	R1714	NRSA63J-823X	MG R	82kΩ 1/16W J
	R1718	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1720	QRJ149J-1R0	C R	1.0Ω 1/4W J
	R1721	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1731-32	NRSA63J-101X	MG R	100Ω 1/16W J
	R1733-34	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1739	NRSA63J-272X	MG R	2.7kΩ 1/16W J
	R1740	NRSA63J-101X	MG R	100Ω 1/16W J
	R1751-52	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1753	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R1754	NRSA63J-272X	MG R	2.7kΩ 1/16W J
	R1755	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1756	NRSA63J-122X	MG R	1.2kΩ 1/16W J
	R1757-58	NRSA63J-101X	MG R	100Ω 1/16W J
	R1764-67	NRSA63J-471X	MG R	470Ω 1/16W J
	R1768	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1769	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1770	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1771	NRSA63J-153X	MG R	15kΩ 1/16W J
	R1772-75	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1776-77	NRSA63J-101X	MG R	100Ω 1/16W J
	R1778	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1801	NRSA63J-680X	MG R	68Ω 1/16W J
	R1802-04	NRSA63J-750X	MG R	75Ω 1/16W J
	R1805	NRSA63J-101X	MG R	100Ω 1/16W J
	R1821	NRSA63J-124X	MG R	120kΩ 1/16W J
	R1831-33	NRSA63J-750X	MG R	75Ω 1/16W J
	R1834-36	NRSA63J-101X	MG R	100Ω 1/16W J
	R1851-54	NRSA63J-101X	MG R	100Ω 1/16W J
	R1855	NRSA63J-153X	MG R	15kΩ 1/16W J
	R1856	NRSA63J-101X	MG R	100Ω 1/16W J
	R1857	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1858-61	NRSA63J-101X	MG R	100Ω 1/16W J
	R1862	NRSA63J-104X	MG R	100kΩ 1/16W J
	R1863	NRSA63J-473X	MG R	47kΩ 1/16W J
⚠	R1901	QRF074K-R47	UNF R	0.47Ω 7W K
	R1902-03	QRE121J-473Y	C R	47kΩ 1/2W J
⚠	R1904-05	QRT029J-R22	MF R	0.22Ω 2W J
	R1906	QRE121J-2R2Y	C R	2.2Ω 1/2W J
	R1907	QRE121J-472Y	C R	4.7kΩ 1/2W J
	R1908	QRK126J-681X	C R	680Ω 1/2W J
	R1910	QRE121J-684Y	C R	680kΩ 1/2W J
	R1911	QRG01GJ-470	OM R	47Ω 1W J
⚠	R1921	QRE121J-100Y	MF R	10Ω 1/2W J
	R1922	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1923	NRSA63J-473X	MG R	47kΩ 1/16W J
⚠	R1924	QRX01GJ-1R0	MF R	1.0Ω 1W J
⚠	R1925	QRX01GJ-1R0	MF R	1.0Ω 1W J
⚠	R1926	QRT029J-1R2	MF R	1.2Ω 2W J
⚠	R1927	QRT029J-1R2	MF R	1.2Ω 2W J
	R1928	QRE121J-272Y	C R	2.7kΩ 1/2W J
	R1929	QRE121J-223Y	C R	22kΩ 1/2W J
	R1930	QRE121J-473Y	C R	47kΩ 1/2W J
	R1932-33	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1934	NRSA63J-273X	MG R	27kΩ 1/16W J
	R1935	NRSA63J-333X	MG R	33kΩ 1/16W J
	R1936	QRE121J-103Y	C R	10kΩ 1/2W J
	R1938-39	QRE121J-103Y	C R	10kΩ 1/2W J
	R1941	QRG029J-180	OM R	18 Ω 2W J
	R1942	QRE121J-5R6Y	C R	5.6Ω 1/2W J
	R1943	QRE121J-820Y	C R	82Ω 1/2W J
	R1991	QRZ9041-275	C R	2.7MΩ 1/2W K

CAPACITOR

⚠	Symbol No.	Part No.	Part Name	Description
	C1001	QETN1HM-475Z	E CAP.	4.7μF 50V M
	C1002	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1003	QETN1EM-476Z	E CAP.	47μF 25V M
	C1004	QETN1AM-227Z	E CAP.	220μF 10V M
	C1005	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1101-02	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1104-05	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1106	QETN1EM-476Z	E CAP.	47μF 25V M
	C1107	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1113-14	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1116	NCB31CK-224X	C CAP.	0.22μF 16V K
	C1117	QETN1EM-476Z	E CAP.	47μF 25V M
	C1118	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1119	NDC31HJ-681X	C CAP.	680pF 50V J
	C1120	QETN1HM-474Z	E CAP.	0.47μF 50V M
	C1124	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1131	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1161-62	QETN1HM-106Z	E CAP.	10μF 50V M
	C1163-64	NDC31HJ-470X	C CAP.	47pF 50V J
	C1165-66	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1202	QETN1HM-105Z	E CAP.	1μF 50V M
	C1203	NCB31HK-152X	C CAP.	1500pF 50V K
	C1221	QETN1HM-106Z	E CAP.	10μF 50V M
	C1222	NCB31HK-104X	C CAP.	0.1μF 50V K
	C1237	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1241	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1243	QETN1EM-476Z	E CAP.	47μF 25V M
	C1244	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1247	QETN1HM-225Z	E CAP.	2.2μF 50V M
	C1252	NDC31HJ-101X	C CAP.	100pF 50V J
	C1253	NDC31HJ-470X	C CAP.	47pF 50V J
	C1254	NDC31HJ-181X	C CAP.	180pF 50V J
	C1261	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1262	QETN1EM-476Z	E CAP.	47μF 25V M
	C1263-64	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1265	QETN1HM-474Z	E CAP.	0.47μF 50V M
	C1266-67	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1268	QETN1EM-476Z	E CAP.	47μF 25V M
	C1269	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1270	QETN1EM-476Z	E CAP.	47μF 25V M
	C1272-73	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1274	NDC31HJ-181X	C CAP.	180pF 50V J
	C1275	QETN1EM-476Z	E CAP.	47μF 25V M
	C1276-78	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1283	NDC31HJ-330X	C CAP.	33pF 50V J
	C1285	QETN1EM-476Z	E CAP.	47μF 25V M
	C1293	NDC31HJ-150X	C CAP.	15pF 50V J
	C1295	QFLC1HJ-103Z	M CAP.	0.01μF 50V J
	C1302	NDC31HJ-331X	C CAP.	330pF 50V J
	C1312	NDC31HJ-271X	C CAP.	270pF 50V J
	C1322	NDC31HJ-271X	C CAP.	270pF 50V J
	C1341	QETN1EM-476Z	E CAP.	47μF 25V M
⚠	C1343	QCZ0121-102	C CAP.	1000pF 3kV Z
	C1352	QETN1EM-476Z	E CAP.	47μF 25V M
	C1354	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1361	QETN1EM-476Z	E CAP.	47μF 25V M
	C1362	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1401	QFV71HJ-474Z	MF CAP.	0.47μF 50V J
	C1402	NCB31HK-102X	C CAP.	1000pF 50V K
	C1403	QENC1CM-106Z	E CAP.	10μF 16V M
	C1404	NCB31HK-222X	C CAP.	2200pF 50V K
	C1405	QETN1HM-106Z	E CAP.	10μF 50V M
	C1406	NCB31HK-102X	C CAP.	1000pF 50V K
	C1407	QETN1VM-107Z	E CAP.	100μF 35V M
	C1408	QCS32HJ-100Z	C CAP.	10pF 500V J
	C1409-10	QFLC2AK-104Z	M CAP.	0.1μF 100V K
	C1411	QETM1VM-228	E CAP.	2200μF 35V M
	C1412	QETN1HM-225Z	E CAP.	2.2μF 50V M
	C1501	QETN1EM-476Z	E CAP.	47μF 25V M
	C1502-03	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1504	QETN1HM-225Z	E CAP.	2.2μF 50V M
	C1505	NCB31AK-474X	C CAP.	0.47μF 10V K

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⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C1506	QETN1EM-476Z	E CAP.	47μF 25V M
	C1507	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1508	QCB32HK-151Z	C CAP.	150pF 500V K
	C1509	QCB32HK-331Z	C CAP.	330pF 500V K
	C1510	QETN2EM-225Z	E CAP.	2.2μF 250V M
⚠	C1522	QFZ0198-133	MPP CAP.	0.013μF1.5kVH ±3%
⚠	C1523	QFZ0197-624	MPP CAP.	0.62μF 250V J
	C1524	QCB32HK-561Z	C CAP.	560pF 500V K
	C1525	QEZ0203-107	E CAP.	100μF 160V M
	C1526	QFLC1HJ-823Z	M CAP.	0.082μF 50V J
	C1527	QETN2EM-106Z	E CAP.	10μF 250V M
	C1528	QETN1VM-477Z	E CAP.	470μF 35V M
	C1529	QETN1VM-476Z	E CAP.	47μF 35V M
	C1530	QFLC2AJ-103Z	M CAP.	0.01μF 100V J
	C1601-02	NCF31AZ-105X	C CAP.	1μF 10V Z
	C1603-04	NCB31HK-332X	C CAP.	3300pF 50V K
	C1605-06	NCB31HK-333X	CHIP CAP.	0.033μF 50V K
	C1607-08	QETN1HM-106Z	E CAP.	10μF 50V M
	C1609	QETN1EM-476Z	E CAP.	47μF 25V M
	C1610	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1611-12	QETN1HM-106Z	E CAP.	10μF 50V M
	C1614	QETN1CM-477Z	E CAP.	470μF 16V M
	C1616	QETN1HM-106Z	E CAP.	10μF 50V M
	C1617	QETN1CM-227Z	E CAP.	220μF 16V M
	C1618	QETN1CM-107Z	E CAP.	100μF 16V M
	C1619	QETN1CM-477Z	E CAP.	470μF 16V M
	C1620	NCF31CZ-104X	C CAP.	0.1μF 16V Z
	C1622	QETN1HM-106Z	E CAP.	10μF 50V M
	C1623	QETN1CM-227Z	E CAP.	220μF 16V M
	C1624	QETN1HM-107Z	E CAP.	100μF 50V M
	C1625	QETN1CM-477Z	E CAP.	470μF 16V M
	C1626	NCF31CZ-104X	C CAP.	0.1μF 16V Z
	C1627	QETN1EM-476Z	E CAP.	47μF 25V M
	C1651	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1652	NCB31HK-104X	C CAP.	0.1μF 50V K
	C1653	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1654	NCB31HK-562X	C CAP.	5600pF 50V K
	C1655	NCB31HK-123X	C CAP.	0.012μF 50V K
	C1656	QETN1HM-105Z	E CAP.	1μF 50V M
	C1657-58	QETN1HM-106Z	E CAP.	10μF 50V M
	C1659	QETN1HM-475Z	E CAP.	4.7μF 50V M
	C1660	QETN1EM-476Z	E CAP.	47μF 25V M
	C1661	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1662	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1663	QETN1HM-475Z	E CAP.	4.7μF 50V M
	C1664	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1665	NCB31HK-272X	C CAP.	2700pF 50V K
	C1666	NCB31HK-473X	C CAP.	0.047μF 50V K
	C1667	QETN1HM-335Z	E CAP.	3.3μF 50V M
	C1668	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1669	QETN1HM-106Z	E CAP.	10μF 50V M
	C1670	QETN1HM-105Z	E CAP.	1μF 50V M
	C1671-72	QETN1HM-106Z	E CAP.	10μF 50V M
	C1673	NCB31HK-223X	C CAP.	0.022μF 50V K
	C1674	NCB31HK-472X	C CAP.	4700pF 50V K
	C1675	QENC1HM-475Z	E CAP.	4.7μF 50V M
	C1676	NCB31HK-104X	C CAP.	0.1μF 50V K
	C1677	NCB31HK-472X	C CAP.	4700pF 50V K
	C1681-88	QETN1HM-106Z	E CAP.	10μF 50V M
	C1701	NCB31HK-102X	C CAP.	1000pF 50V K
	C1702-03	QETN1HM-106Z	E CAP.	10μF 50V M
	C1704	QETN1EM-476Z	E CAP.	47μF 25V M
	C1705	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1708-09	NDC31HJ-220X	C CAP.	22pF 50V J
	C1711	QETN1EM-476Z	E CAP.	47μF 25V M
	C1712	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1716	QETN1HM-106Z	E CAP.	10μF 50V M
	C1751	QETN1EM-476Z	E CAP.	47μF 25V M
	C1801-02	QETN1HM-106Z	E CAP.	10μF 50V M
	C1803	QETN1HM-105Z	E CAP.	1μF 50V M
	C1804	QETN1HM-106Z	E CAP.	10μF 50V M
	C1807	NCB31HK-103X	C CAP.	0.01μF 50V K

⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C1815	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1831-33	NCB31HK-104X	C CAP.	0.1μF 50V K
	C1834	QETN1HM-106Z	E CAP.	10μF 50V M
	C1851-52	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1853	QETN1HM-106Z	E CAP.	10μF 50V M
	C1854-56	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1857	QETN1HM-106Z	E CAP.	10μF 50V M
	C1858-60	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1861	QETN1EM-476Z	E CAP.	47μF 25V M
	C1862	QETN1HM-106Z	E CAP.	10μF 50V M
⚠	C1901	QFZ9072-104	MF CAP.	0.1μFAC275V K
⚠	C1902	QFZ9072-104	MF CAP.	0.1μFAC275V K
	C1903	QEZ0169-477	E CAP.	470μF 200V M
⚠	C1904	QCZ9054-102	C CAP.	1000pFAC250V Z
⚠	C1905	QCZ9054-102	C CAP.	1000pFAC250V Z
	C1907	QETN1HM-476Z	E CAP.	47μF 50V M
	C1908	QCZ0340-102	C CAP.	1000pF 2kV K
	C1909	NDC31HJ-102X	C CAP.	1000pF 50V J
	C1910	NDC31HJ-471X	C CAP.	470pF 50V J
	C1921	QETN1EM-477Z	E CAP.	470μF 25V M
	C1922	QETN1CM-107Z	E CAP.	100μF 16V M
	C1923	QEZ0203-107	E CAP.	100μF 160V M
	C1924	QETN2CM-476Z	E CAP.	47μF 160V M
	C1925	QETN1CM-477Z	E CAP.	470μF 16V M
	C1926	QETN1CM-107Z	E CAP.	100μF 16V M
	C1927	QETN1CM-477Z	E CAP.	470μF 16V M
	C1929	QCZ0340-102	C CAP.	1000pF 2kV K
	C1930-31	QCB32HK-102Z	C CAP.	1000pF 500V K
	C1932	QETN0JM-107Z	E CAP.	100μF 6.3V M
	C1933	QETN1VM-476Z	E CAP.	47μF 35V M
	C1935	QETN1CM-476Z	E CAP.	47μF 16V M
	C1940	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1941-42	QETN1CM-107Z	E CAP.	100μF 16V M
	C1943	NCB31HK-103X	C CAP.	0.01μF 50V K
	C1944	QETN1CM-107Z	E CAP.	100μF 16V M
	C1945	NCB31HK-103X	C CAP.	0.01μF 50V K
⚠	C1991	QCZ9074-103	C CAP.	0.01μFAC250V M
⚠	C1992	QCZ9074-103	C CAP.	0.01μFAC250V M
	TRANSFORMER			
	T1111	QQR0907-001	I.F.TRANSFOMER	
	T1501	CE42034-002	H.DRIVE TRANSF.	
⚠	T1521	QQH0129-001	H.V.TRANSF.	
⚠	T1901	QQT0355-001	POWER TRANSF.	
⚠	T1921	QQS0158-001	SWITCH.TRANSF.	
	COIL			
	L1101	QQLZ014-R39	PEAKING COIL	
	L1131	QQL244K-220Z	PEAKING COIL	
	L1161	QQL244K-220Z	PEAKING COIL	
	L1251	QQL244K-4R7Z	COIL	4.7μH K
	L1281	QQL244K-150Z	COIL	15μH K
	L1291	QQL244K-150Z	COIL	15μH K
	L1341	QQL03BJ-390Z	COIL	39μH J
	L1521	QQR1027-004	LINE FILTER	
	L1921-22	QQL26AK-470Z	COIL	47μH K
	DIODE			
	D1352	MTZJ9.1C-T2	ZENER DIODE	
	D1353	1SS133-T2	SI.DIODE	
	D1365	1SS133-T2	SI.DIODE	
	D1366	1SS133-T2	SI.DIODE	
	D1367	1SS133-T2	SI.DIODE	
	D1368	1SS133-T2	SI.DIODE	
	D1369	1SS133-T2	SI.DIODE	
	D1370	1SS133-T2	SI.DIODE	
	D1401	1SR35-400A-T2	SI.DIODE	
	D1402	MTZJ75-T2	ZENER DIODE	
	D1501	MTZJ3.3A-T2	ZENER DIODE	
	D1521	1SR35-400A-T2	SI.DIODE	
	D1522	RH1S-T3	SI.DIODE	

AV-27D303/R / AV-27D203/R

DIODE

⚠	Symbol No.	Part No.	Part Name	Description
	D1523	1SR35-400A-T2	SI.DIODE	
	D1524	RGP10J-5025-T3	SI.DIODE	
	D1525	MTZJ5.6A-T2	ZENER DIODE	
	D1526	MA4068N/Z1/-T2	ZENER DIODE	
	D1661	MTZJ9.1C-T2	ZENER DIODE	
	D1681-88	MTZJ9.1C-T2	ZENER DIODE	
	D1705	1SS133-T2	SI.DIODE	
	D1751	LH2244O	L.E.D.	
	D1801-04	MTZJ9.1C-T2	ZENER DIODE	
	D1807	MTZJ9.1C-T2	ZENER DIODE	
	D1831-34	MTZJ9.1C-T2	ZENER DIODE	
⚠	D1901	GSIB460-S1	DIODE	
	D1902	RGP10J-5025-T3	SI.DIODE	
	D1903	RGP10J-5025-T3	SI.DIODE	
	D1904	RGP10J-5025-T3	SI.DIODE	
	D1905	SARS01-T2	SI.DIODE	
	D1908	MTZJ15C-T2	ZENER DIODE	
	D1921-24	1SR35-400A-T2	SI.DIODE	
	D1925	1SS133-T2	SI.DIODE	
	D1926	RU3AM-LFC4	SI.DIODE	
	D1927	RU3YX-LFC4	SI.DIODE	
	D1928	RU3YX-LFC4	SI.DIODE	
	D1930	1SS133-T2	SI.DIODE	
	D1931	1SS133-T2	SI.DIODE	
	D1932	MTZJ33B-T2	ZENER DIODE	
	D1933	1N4002G-T2	SI.DIODE	

TRANSISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	Q1001	DTC124EKA-X	DIGI.TRANSISTOR	
	Q1101	2SC5083/L-P/-T	SI.TRANSISTOR	
	Q1131	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1161	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1251-52	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1281	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1282	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1283	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1291	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1292	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1293	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1301	2SC4544-LB	SI.TRANSISTOR	
	Q1311	2SC4544-LB	SI.TRANSISTOR	
	Q1321	2SC4544-LB	SI.TRANSISTOR	
	Q1352	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1501	2SC4212/Z1/	SI.TRANSISTOR	
⚠	Q1521	2SD2634-YD	SI.TRANSISTOR	H.OUT
	Q1602	DTC124EKA-X	DIGI.TRANSISTOR	
	Q1681	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1682	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1683	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1684	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1701	2SB709A/QR/-X	SI.TRANSISTOR	
	Q1751	DTA124EKA-X	DIGI.TRANSISTOR	
	Q1851	2SD601A/QR/-X	SI.TRANSISTOR	
	Q1921	2SD1383K/AB/-X	SI.TRANSISTOR	
	Q1922	2SC2785/JH/-T	SI.TRANSISTOR	
	Q1923	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q1924	2SA1208/ST/Z1-T	SI.TRANSISTOR	

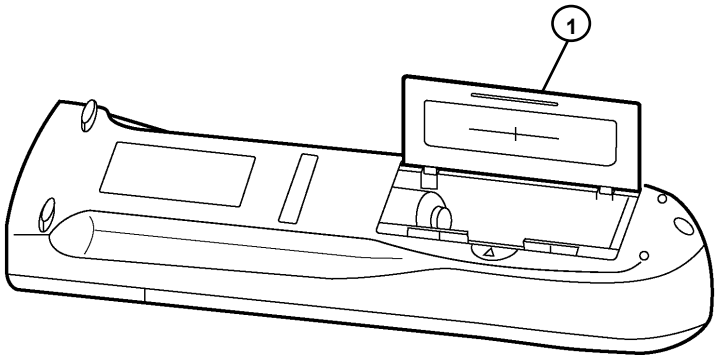
IC

⚠	Symbol No.	Part No.	Part Name	Description
	IC1101	M52342SP	I.C(MONO-ANA)	
	IC1201	TM8812CSANG3PF2	I.C(M)	
	IC1251	TC90A49P	I.C(DIGI-MOS)	
⚠	IC1421	AN5522	I.C(MONO-ANA)	
	IC1601	NJM2150AD	I.C(MONO-ANA)	
⚠	IC1602	LA4446	I.C(MONO-ANA)	
	IC1603	CXA2134Q-X	I.C(M)	
	IC1702	AT24C04-27D303	I.C	(SERVICE)
	IC1703	S-80840CNY-T	I.C(MONO-ANA)	
	IC1704	AN78L05-T	I.C(MONO-ANA)	
	IC1751	GP1UM281QK	IFR DETECT UNIT	
	IC1851	TA1218AN	I.C(MONO-ANA)	
	IC1901	STR-G5624A/F8	I C	
	IC1921	AN7809F	I.C(MONO-ANA)	
	IC1922	AN7805F	I.C(MONO-ANA)	

OTHERS

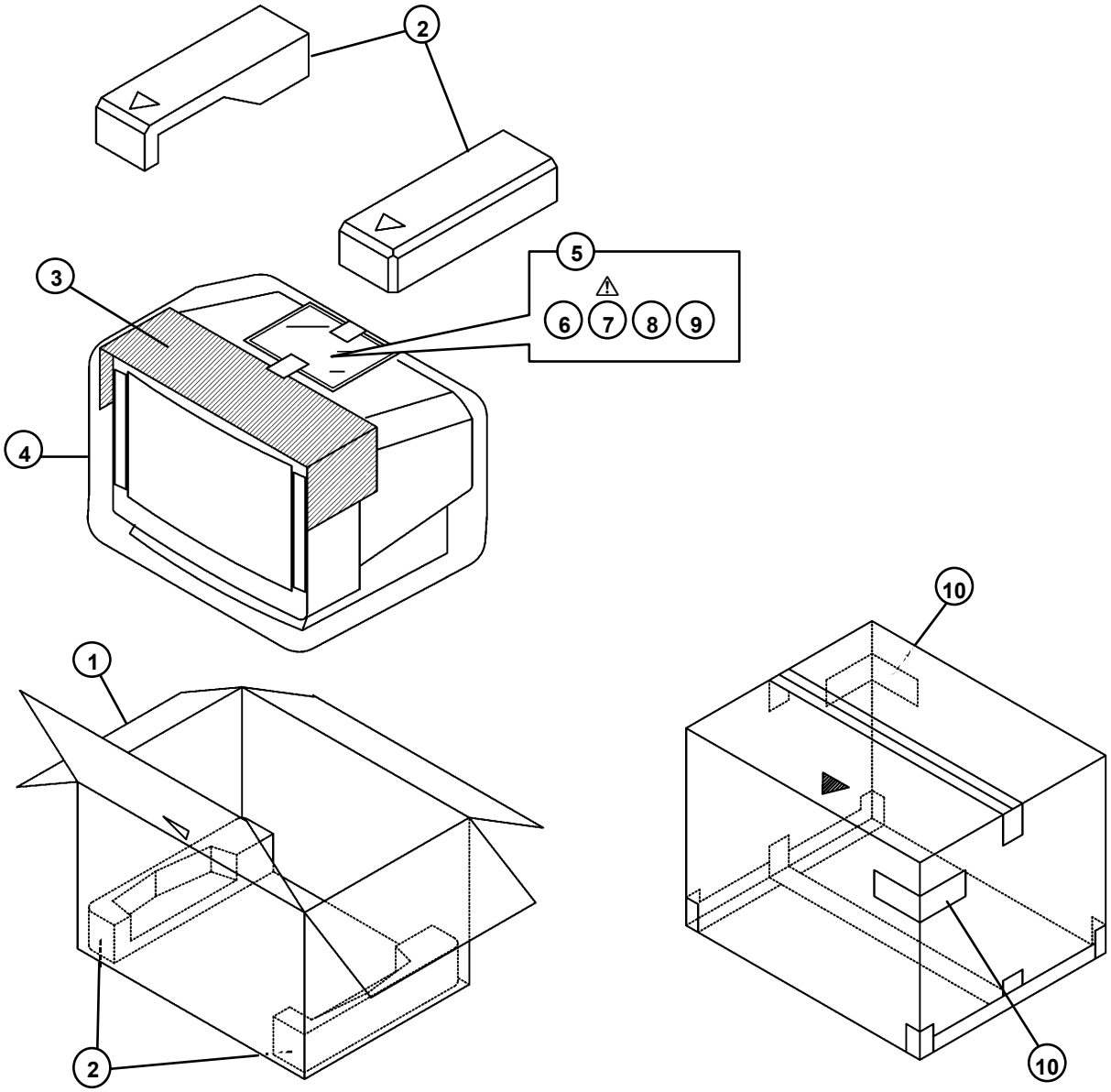
⚠	Symbol No.	Part No.	Part Name	Description
		LC30190-001B-A	L.E.D.HOLDER	
	CF1001	QAX0349-001	CERAMIC FILTER	
	CF1131	QAX0639-001Z	CERAMIC FILTER	
	CF1161	QAX0642-001Z	CERAMIC FILTER	
	CL1003	QZW0028-001	WIRE CLAMP	
⚠	CN10PW	QMPD390-200-JS	POWER CORD	or QMPD200-200-JC
⚠	F1901	QMF51N1-5R0-J5	FUSE	5.0A
	FC1901	CEMG002-001Z	FUSE CLIP	(x2)
	J1001	QNZ0454-001	PIN JACK	
	J1002	QNN0348-001	PIN JACK	
	J1003	QNN0349-002	PIN JACK	
	J1004	QNN0348-001	PIN JACK	
	J1005	CEMN065-001	PIN JACK	
	J1006	CEMN065-002	PIN JACK	
	J1007	CEMN072-003	PIN JACK	
	K1001	QQR0582-001Z	BEADS CORE	
	K1101	QQR0582-001Z	BEADS CORE	
	K1251	QQR0582-001Z	BEADS CORE	
	K1253-54	QQR0582-001Z	BEADS CORE	
	K1401	QQR0582-001Z	BEADS CORE	
	K1701-02	QQR0582-001Z	BEADS CORE	
	K1901-02	QQR0582-001Z	BEADS CORE	
	K1921-23	QQR0582-001Z	BEADS CORE	
⚠	LF1901	QQR0527-003	LINE FILTER	
⚠	RY1901	QSK0085-001	RELAY	
	S1401	QSL4A13-C02	LEVER SWITCH	
	S1751	QSW0619-003Z	PUSH SWITCH	POWER
	S1752	QSW0619-003Z	PUSH SWITCH	VOL+
	S1753	QSW0619-003Z	PUSH SWITCH	VOL-
	S1754	QSW0619-003Z	PUSH SWITCH	CH+
	S1755	QSW0619-003Z	PUSH SWITCH	CH-
	S1756	QSW0619-003Z	PUSH SWITCH	MENU
	SF1101	QAX0723-001	SAW FILTER	
⚠	SK1351	QNZ0537-001	C.R.T.SOCKET	
⚠	TH1901	QAD0129-3R0	P.THERMISTOR	
⚠	TU1001	QAU0275-001	TUNER	
⚠	VA1901	ERZV10V621CS	VARISTOR	
	W1602	QRX029J-3R3	MF R	3.3Ω 2W J
	W1603	QRE141J-101Y	C R	100Ω 1/4W J
	W1605	QRE141J-101Y	C R	100Ω 1/4W J
	X1701	QAX0717-001Z	CRYSTAL	

REMOTE COTROL UNIT PARTS LIST (RM-C252-1H)



⚠ Ref.No.	Part No.	Part Name	Description
1	UR77EC0603	BATTERY COVER	(RM-C252-1H)

PACKING



PACKING PARTS LIST

⚠	Ref.No.	Part No.	Part Name	Description
	1	GQ10009-007B-A	PACKING CASE	
	2	GQ10019-001A-A	CUSHION ASSY	4pcs in 1set
	3	CP30055-001-A	TOP COVER	
	4	CP30056-008-A	POLY BAG	
	5	QPA02503505	POLY BAG	
	6	RM-C252-1H	REMOCON UNIT	
⚠	7	LCT1145-001A-A	INST.BOOK	
	8	BT-52004-2Q	WARRANTY CARD	
	9	BT-51028-1Q	REGISTER CARD	
	10	CM36616-001-A	CORNER LABEL	2pcs in 1set

Memo

Memo

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SCHEMATIC DIAGRAMS

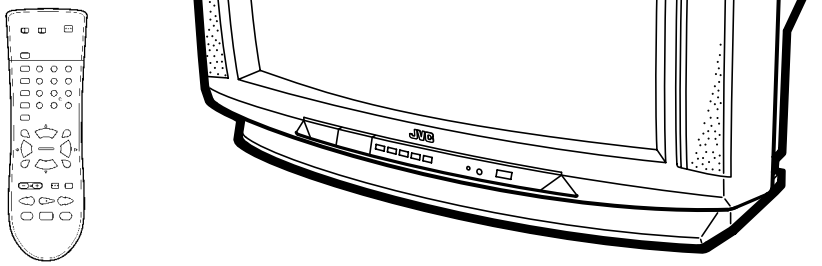
COLOR TELEVISION

AV-27D303/S/R
AV-27D203/S/R

BASIC CHASSIS
FE

CD-ROM No.SML200206

BBE



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No.51940
May 2002

AV-27D303/S/R,AV-27D203/S/R
STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal	: Colour bar signal
(2)Setting positions of each knob/button and variable resistor	: Original setting position when shipped
(3)Internal resistance of tester	:DC 20kΩ/V
(4)Oscilloscope sweeping time	:H ⇒ 20µS/div :V ⇒ 5mS/div :Others ⇒ Sweeping time is specified
(5)Voltage values	:All DC voltage values

∗ Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL [EXAMPLE]

● In the PW board :R1209 → R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

No unit	:[Ω]
K	:[K Ω]
M	:[M Ω]

● Rated allowable power

No indication	:1/ 16 [W]
Others	:As specified

● Type

No indication	:Carbon resistor
OMR	:Oxide metal film resistor
MFR	:Metal film resistor
MPR	:Metal plate resistor
UNFR	:Uninflammable resistor
FR	:Fusible resistor

∗ Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

● Capacitance value

1 or higher	:[pF]
less than 1	:[µF]

● Withstand voltage

No indication	:DC50[V]
Others	:DC withstand voltage [V]
AC indicated	:AC withstand voltage [V]

∗ Electrolytic Capacitors
47/50[Example]:Capacitance value [µF]/withstand voltage[V]

● Type

No indication	:Ceramic capacitor
MM	:Metalized mylar capacitor
PP	:Polypropylene capacitor
MPP	:Metalized polypropylene capacitor
MF	:Metalized film capacitor
TF	:Thin film capacitor
BP	:Bipolar electrolytic capacitor
TAN	:Tantalum capacitor

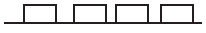
(3)Coils

No unit	:[µH]
Others	:As specified

(4)Power Supply

:B1

:B2 (12V)

:9V

:5V

∗ Respective voltage values are indicated

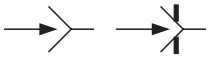
(5)Test point


:Test point

:Only test point display

(6)Connecting method


:Connector

:Wrapping or soldering

:Receptacle

(7)Ground symbol


:LIVE side ground

:ISOLATED(NEUTRAL) side ground

:EARTH ground

:DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND and the ISOLATED(NEUTRAL) : (⏚) side GND.Therefore, care must be taken for the following points.

(1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected , a fuse or any parts will be broken.

◇ **Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.**

NOTE

◇ **Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.**
When ordering parts, please use the numbers that appear in the Parts List.

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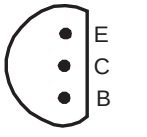
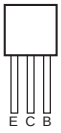
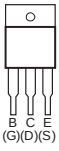
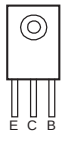
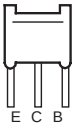
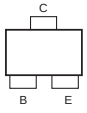
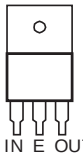
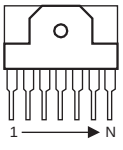
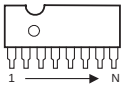
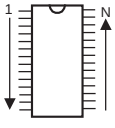
SEMICONDUCTOR SHAPES

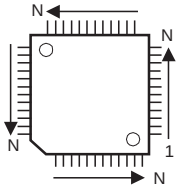
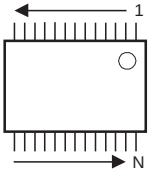
TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

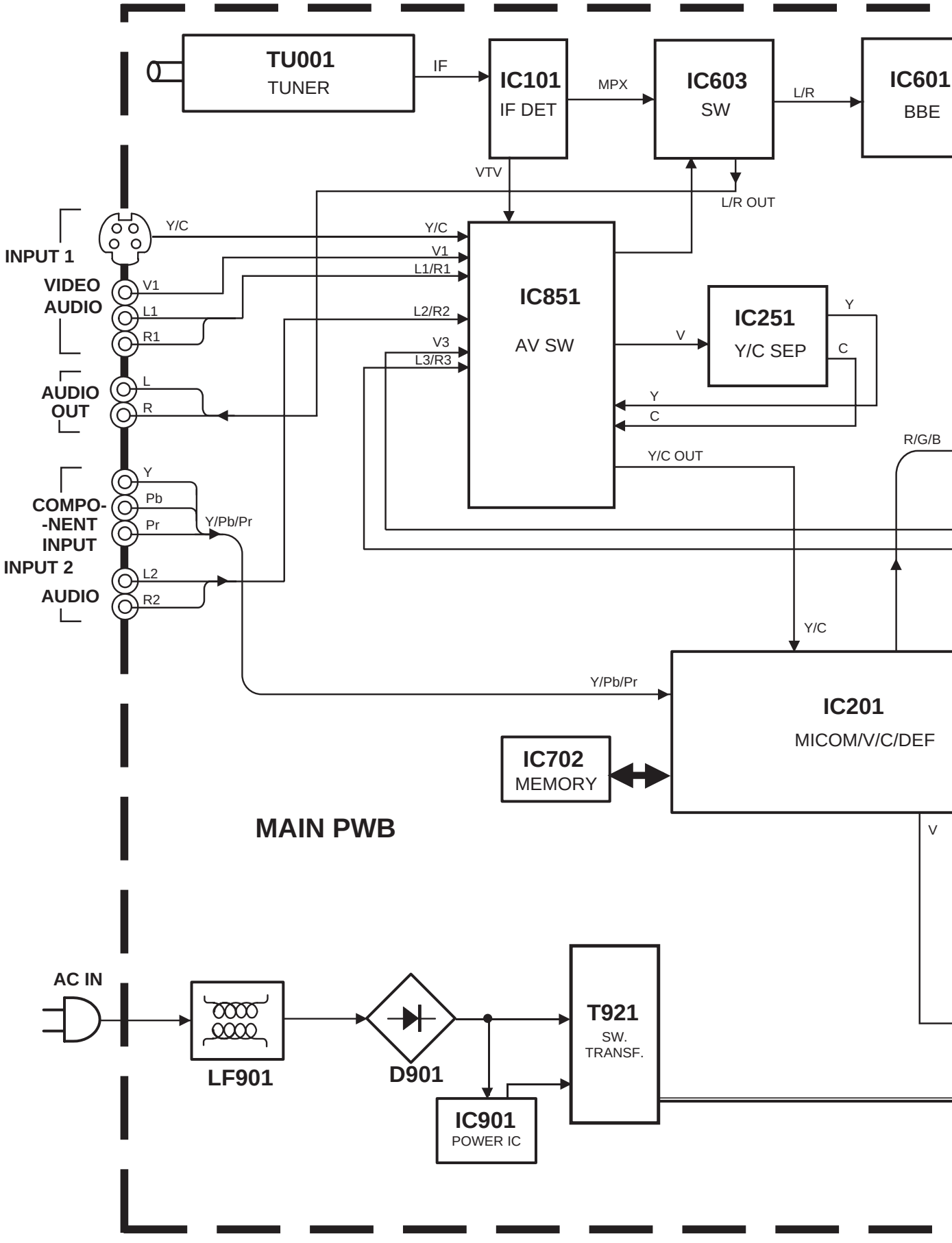
IC

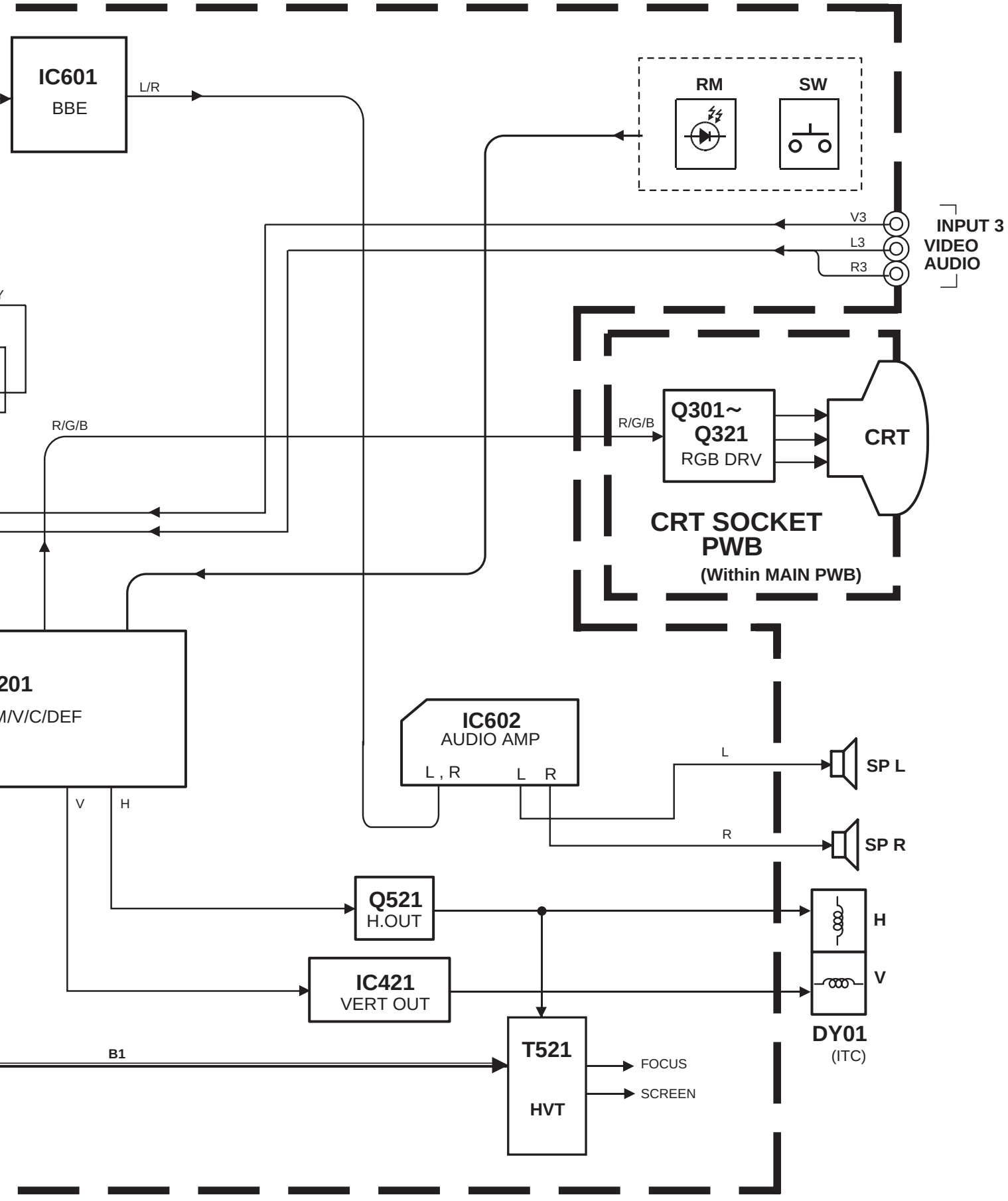
BOTTOM VIEW	FRONT VIEW			TOP VIEW
				

CHIP IC

TOP VIEW		
		

BLOCK DIAGRAM



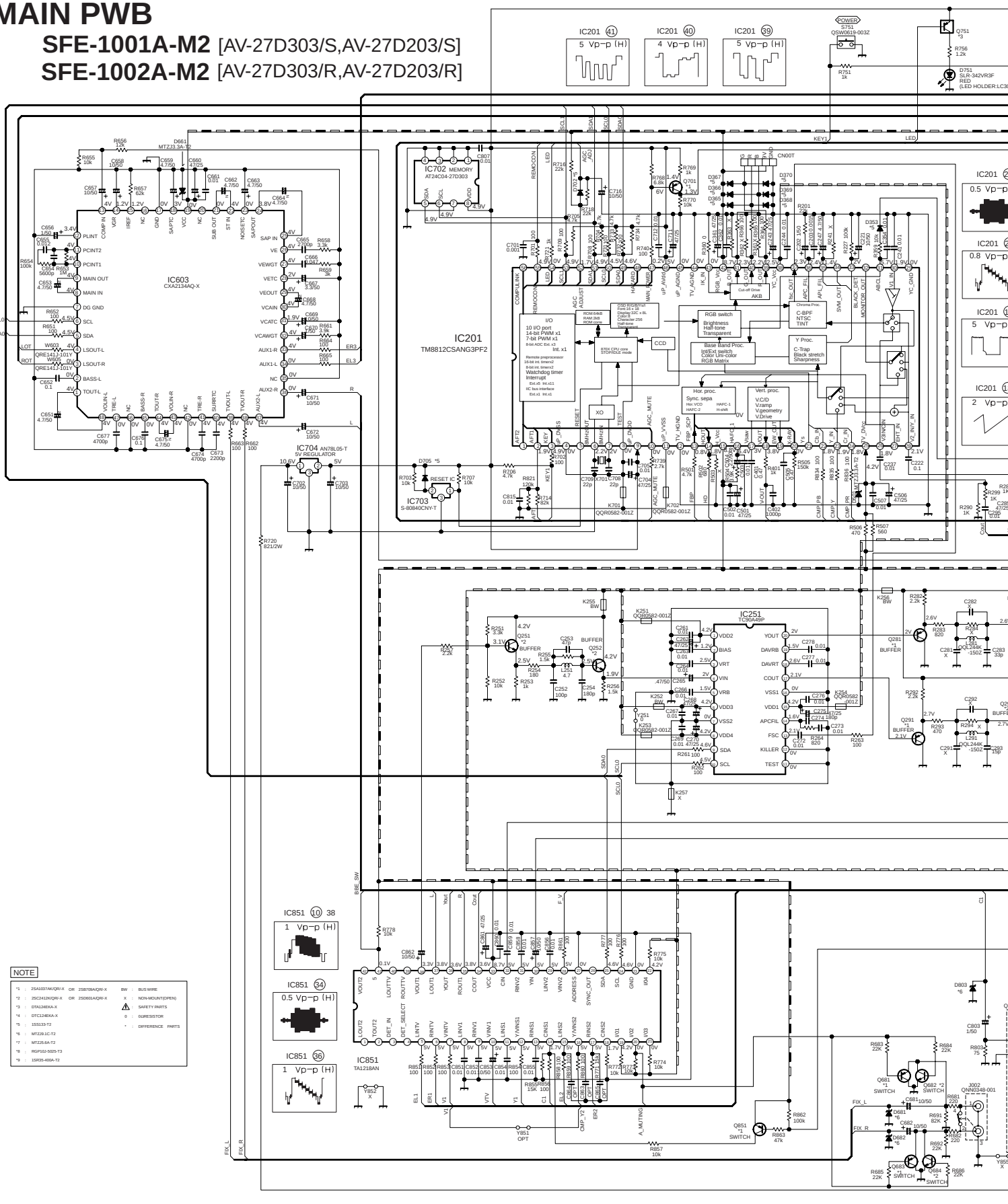

IC601
BBE
L/R
RM
SW
V3
L3
R3
INPUT 3
VIDEO
AUDIO
R/G/B
R/G/B
Q301~
Q321
RGB DRV
CRT
CRT SOCKET
PWB
(Within MAIN PWB)
201
M/V/C/DEF
V
H
IC602
AUDIO AMP
L , R
L R
L
SP L
R
SP R
Q521
H.OUT
IC421
VERT OUT
H
V
DY01
(ITC)
B1
T521
HVT
FOCUS
SCREEN

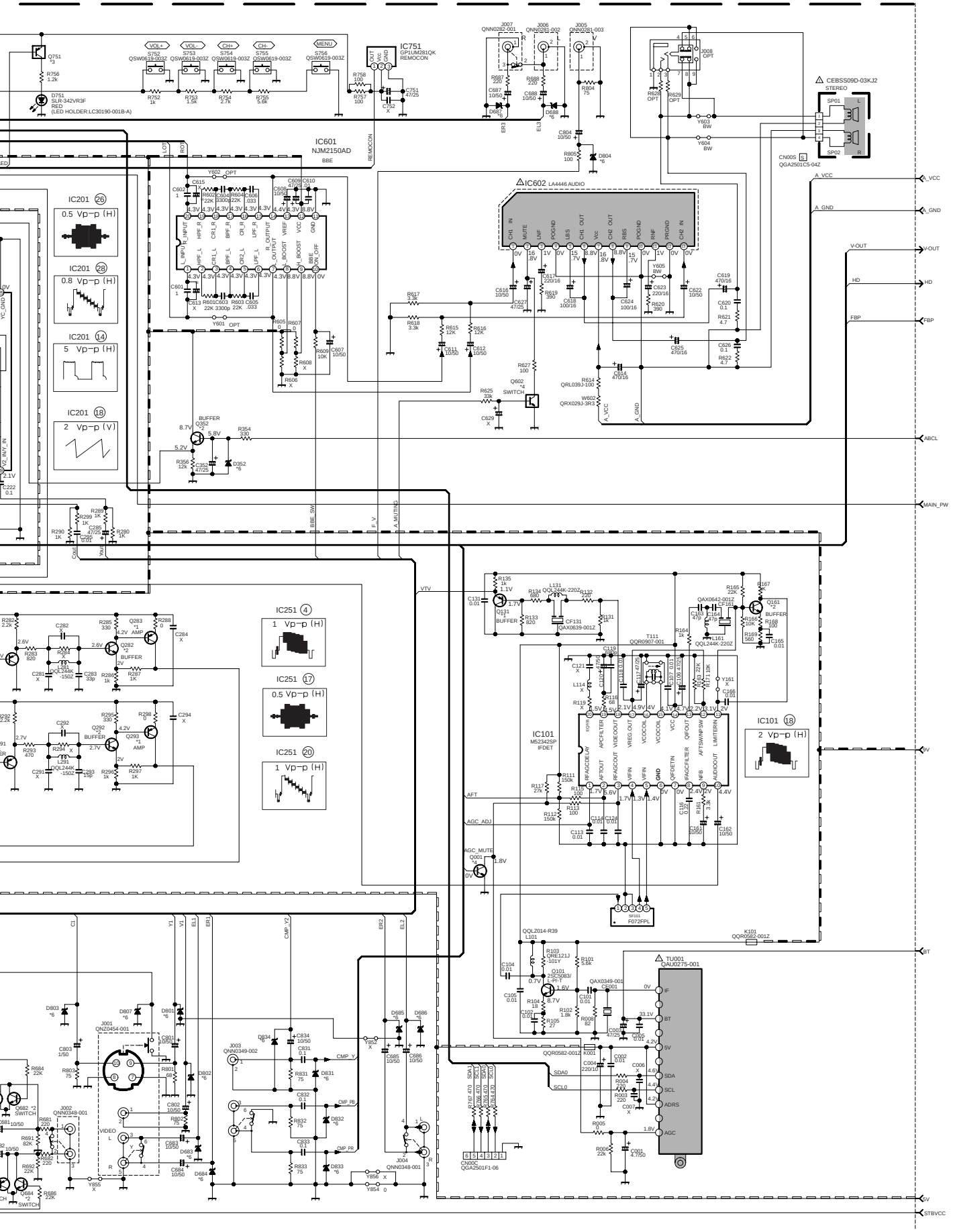
CIRCUIT DIAGRAMS *MAIN PWB CIRCUIT DIAGRAMS*

MAIN PWB

SFE-1001A-M2 [AV-27D303/S,AV-27D203/S]

SFE-1002A-M2 [AV-27D303/R,AV-27D203/R]




IC751
GP1UM281QK
REMOCON
IC601
NJM2150AD
BBE
REMOCON
IC602 LA4446 AUDIO
IC101
M52342SP
IFDET
IC201 26
0.5 Vp-p (H)
IC201 28
0.8 Vp-p (H)
IC201 14
5 Vp-p (H)
IC201 18
2 Vp-p (V)
IC251 4
1 Vp-p (H)
IC251 17
0.5 Vp-p (H)
IC251 20
1 Vp-p (H)
IC101 18
2 Vp-p (H)
TU001
QAU0275-001
CEBSS09D-03KJ2
STEREO
A_VCC
A_GND
V-OUT
HD
FBP
ABCL
MAIN_PW
5V
BT
STBVCC
VTV
AFT
AGC_ADJ
AGC_MUTE
SDA0
SCL0
SDA
SCL
ADRS
AGC

MAIN & CRT SOCKET PWB CIRCUIT DIAGRAM

MAIN PWB [1/2]

SFE-1001A-M2

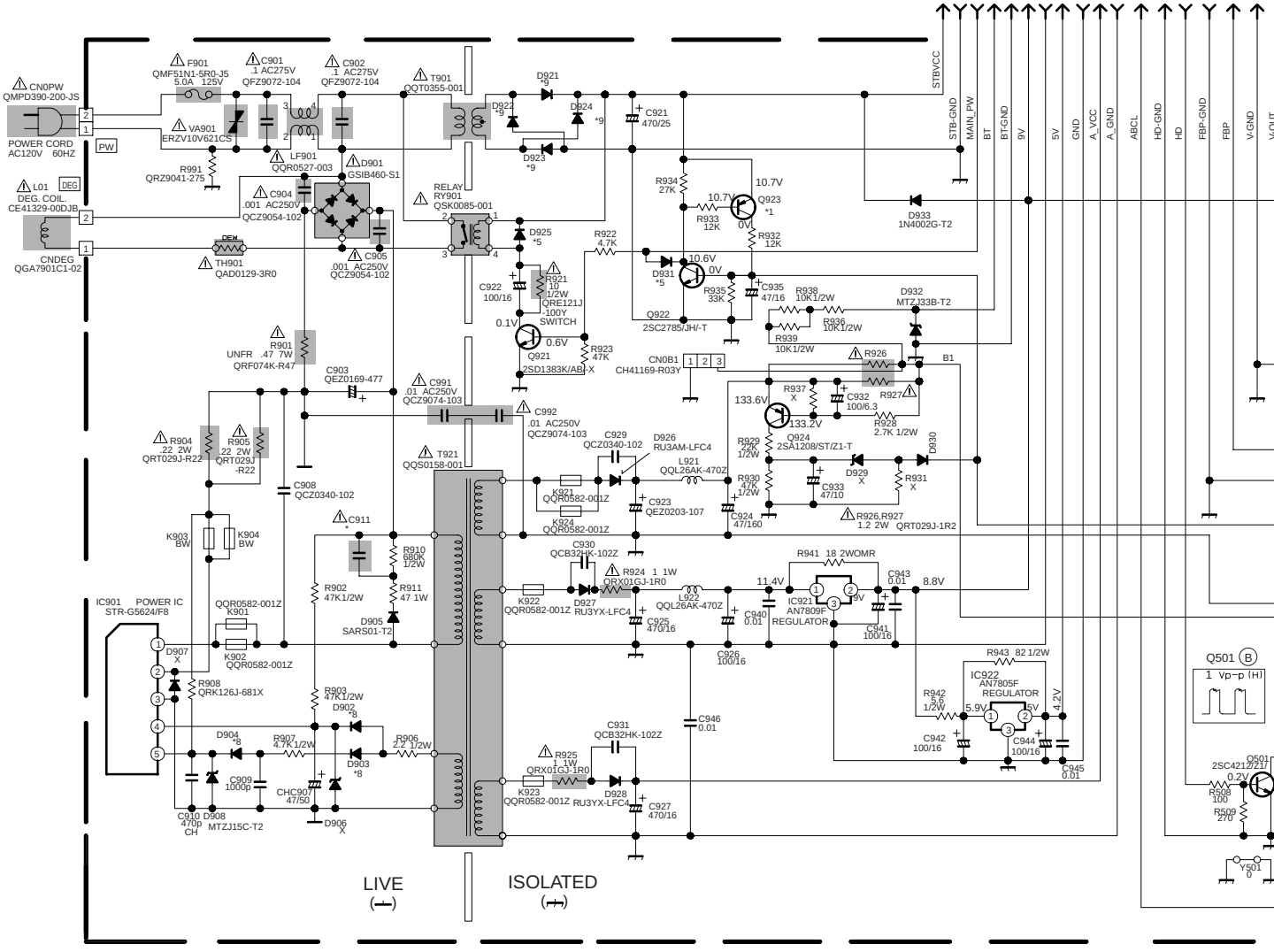
[AV-27D303/S,AV-27D203/S]

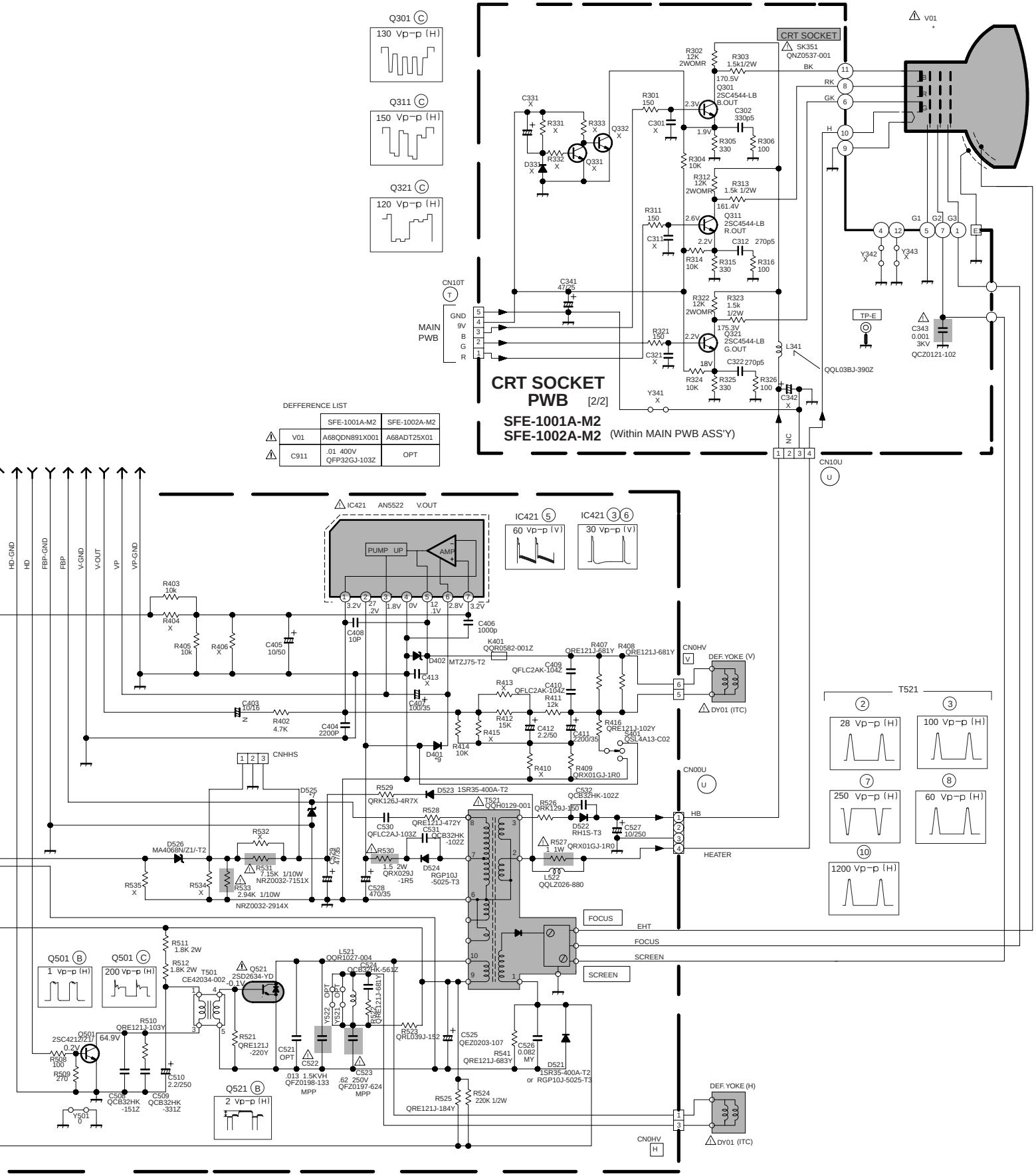
SFE-1002A-M2

[AV-27D303/R,AV-27D203/R]

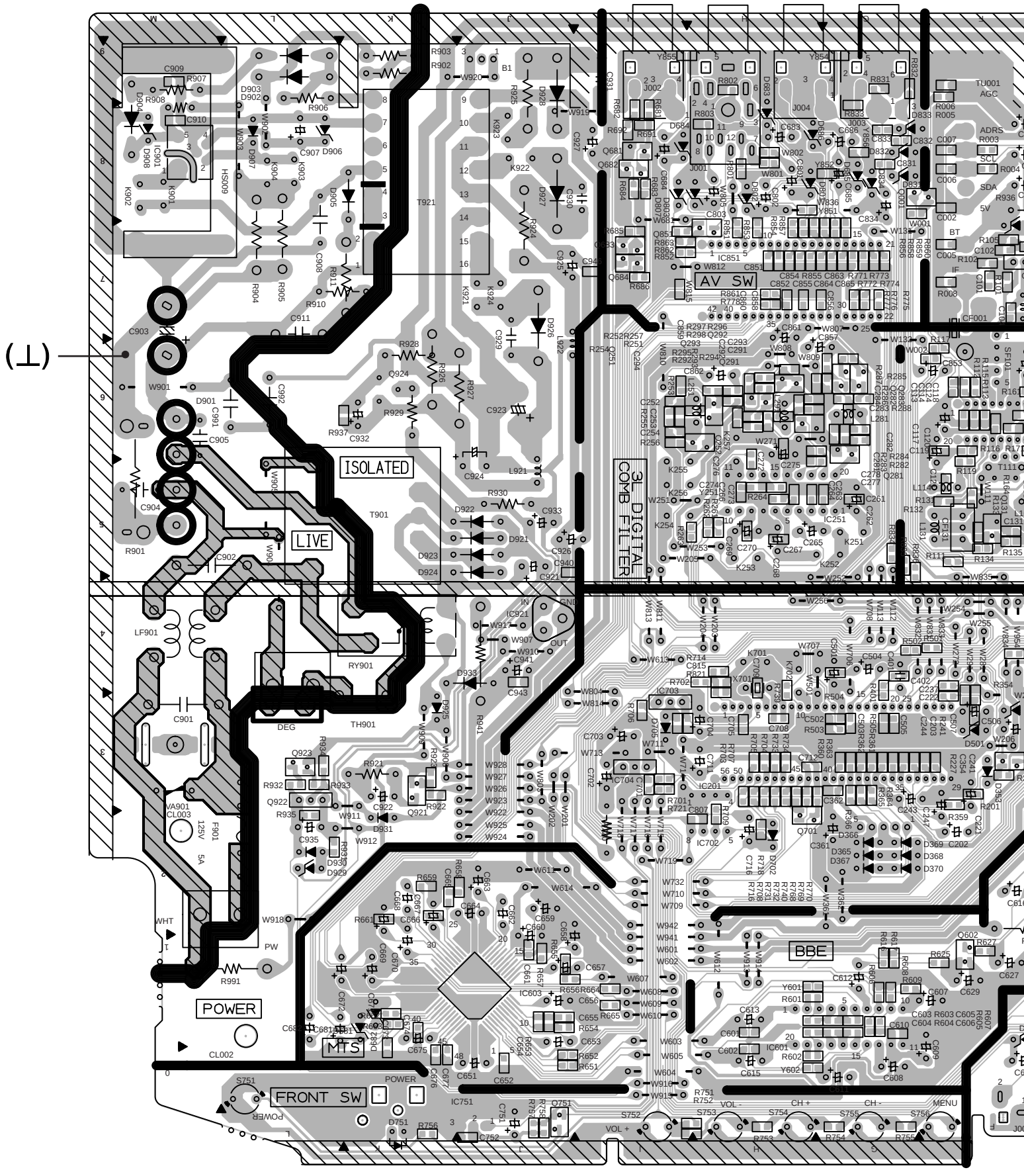
NOTE

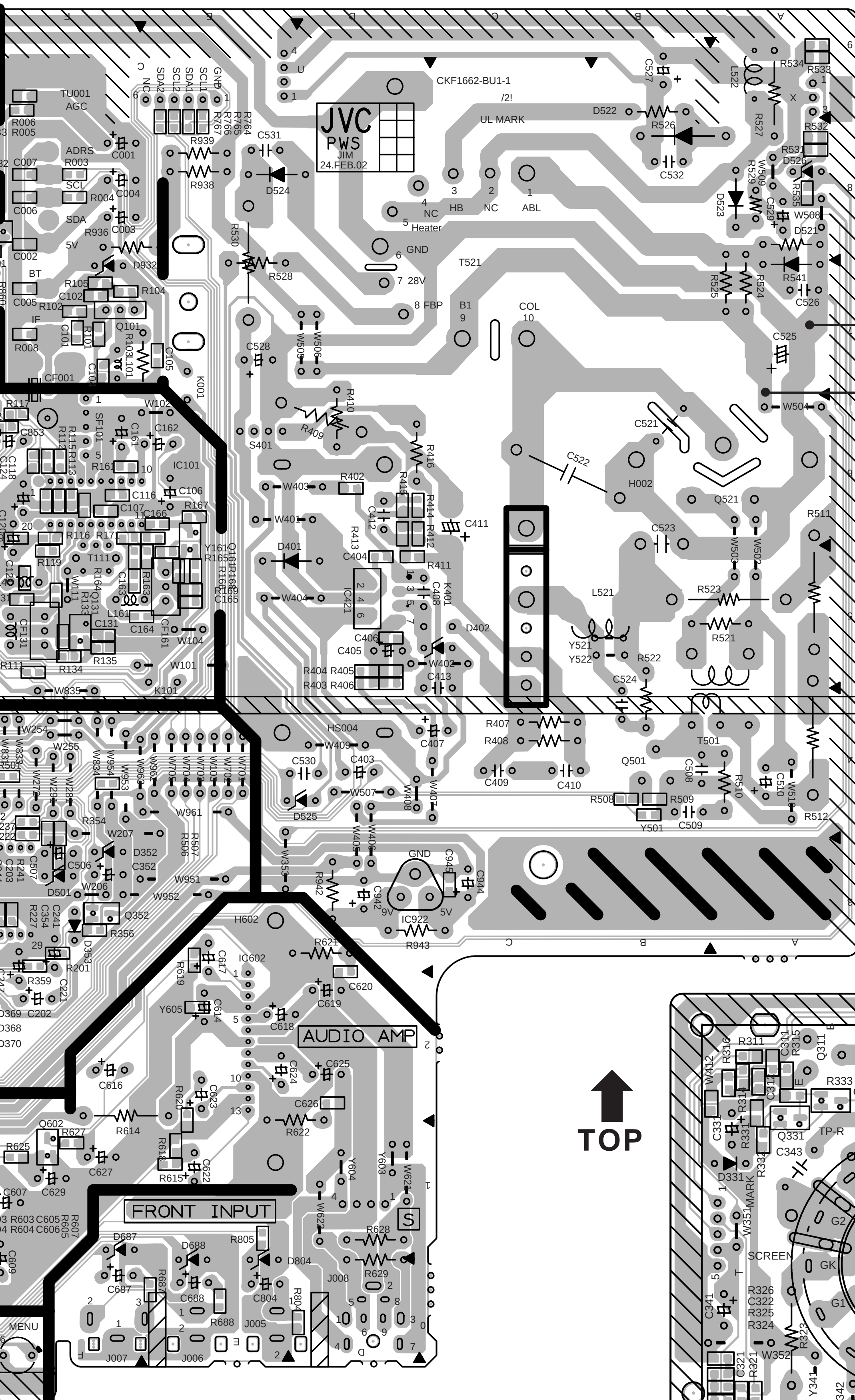
*1 : 2SA1037AK/QR/-X		BW : BUS WIRE	
*2 : 2SC2412K/QR/-X		X : NON-MOUNT(OPEN)	
*3 : DTA124EKA-X		⚠ : SAFETY PARTS	
*4 : DTC124EKA-X		0 : 0Ω RESISTOR	
*5 : 1SS133-T2		* : DIFFERENCE PARTS	
*6 : MTZJ9.1C-T2			
*7 : MTZJ5.6A-T2			
*8 : RGP10J-5025-T3			
*9 : 1SR35-400A-T2 or 1N4003-T2			



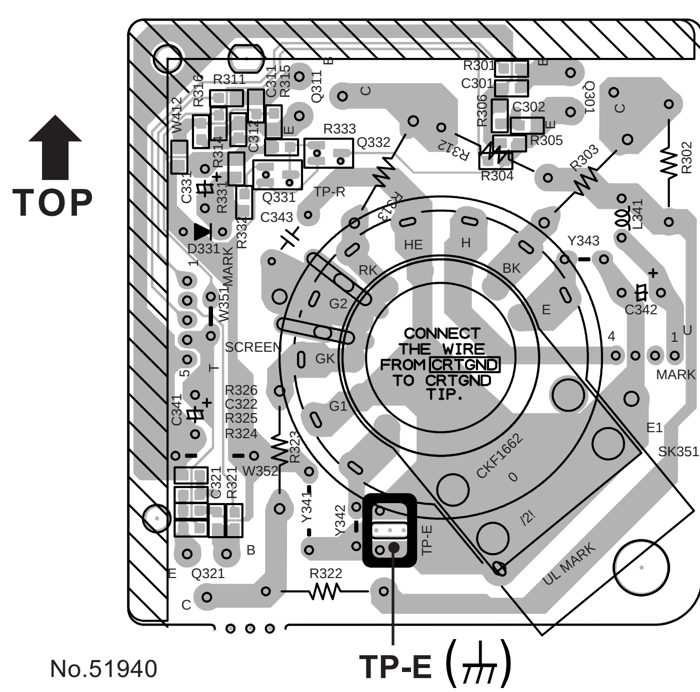

CRT SOCKET PWB [2/2]
SFE-1001A-M2
SFE-1002A-M2 (Within MAIN PWB ASS'Y)
CRT SOCKET
SK351
QNZ0537-001
MAIN PWB
CN10T
CN10U
DEFFERENCE LIST
SFE-1001A-M2
SFE-1002A-M2
V01
A68QDN891X001
A68ADT25X01
C911
.01 400V QFP32GJ-103Z
OPT
Q301 130 Vp-p (H)
Q311 150 Vp-p (H)
Q321 120 Vp-p (H)
IC421 AN5522 V.OUT
IC421 5 60 Vp-p (V)
IC421 3 6 30 Vp-p (V)
T521
T501
L521 QQR1027-004
L522 QQLZ026-880
T521 QQH0129-001
K401 QQR0582-001Z
L341 QQL03BJ-390Z
QCZ0121-102
DEF.YOKE (V)
DEF.YOKE (H)
DY01 (ITC)
CNHHS
CN0HV
CN00U
HB
HEATER
FOCUS
EHT
SCREEN
Q501 1 Vp-p (H)
Q501 200 Vp-p (H)
Q521 2SD2634-YD
Q521 2 Vp-p (H)
T521 28 Vp-p (H)
T521 100 Vp-p (H)
T521 250 Vp-p (H)
T521 60 Vp-p (H)
T521 1200 Vp-p (H)
HD-GND
HD
FBP-GND
FBP
V-GND
V-OUT
VP
VP-GND

PATTERN DIAGRAMS *MAIN PWB PATTERN*





CRT SOCKET
PWB PATTERN



CHANNEL CHART (US)

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	02		Ⅰ
			03		
			04		
			05		
			06		
		VH	07		Ⅱ
			08		
			09		
			10		
			11		
			12		
			13		
×	○	MID	A	14	Ⅰ
			B	15	
			C	16	Ⅱ
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
		HYPER	W+1	37	
			W+2	38	
			W+3	39	
			W+4	40	
			W+5	41	
			W+6	42	
			W+7	43	
			W+8	44	
			W+9	45	
			W+10	46	
			W+11	47	
			W+12	48	Ⅳ
			W+13	49	
			W+14	50	
			W+15	51	
			W+16	52	
			W+17	53	
			W+18	54	
			W+19	55	
			W+20	56	
			W+21	57	
			W+22	58	
			W+23	59	
			W+24	60	
			W+25	61	
			W+26	62	
			W+27	63	
			W+28	64	
		ULTRA	W+29	65	
			W+30	66	
			W+31	67	
			W+32	68	
			W+33	69	
			W+34	70	

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
×	○	ULTRA	W+35	71	Ⅳ
			W+36	72	
			W+37	73	
			W+38	74	
			W+39	75	
			W+40	76	
			W+41	77	
			W+42	78	
			W+43	79	
			W+44	80	
			W+45	81	
			W+46	82	
			W+47	83	
			W+48	84	
			W+49	85	
			W+50	86	
			W+51	87	
			W+52	88	
			W+53	89	
			W+54	90	
			W+55	91	
			W+56	92	
			W+57	93	
			W+58	94	
			W+59	100	
			W+60	101	
			W+61	102	
			W+62	103	
			W+63	104	
			W+64	105	
			W+65	106	
			W+66	107	
			W+67	108	
			W+68	109	
			W+69	110	
			W+70	111	
			W+71	112	
			W+72	113	
			W+73	114	
			W+74	115	
			W+75	116	
			W+76	117	
			W+77	118	
			W+78	119	
			W+79	120	
			W+80	121	
			W+81	122	
			W+82	123	
			W+83	124	
			W+84	125	
		SUB MID	A-8	01	Ⅰ
			A-4	96	
			A-3	97	
			A-2	98	
			A-1	99	
○	×	UHF	14 ∫ 69		Ⅳ

TOTAL 180CH
{ VHF 124CH
{ UHF 56CH

NOTE:
TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES.
SPECIAL ADAPTERS MAY BE REQUIRED.

CHANNEL CHART (CA)

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	02		Ⅰ
			03		
			04		
			05		
			06		
		VH	07		Ⅱ
			08		
			09		
			10		
			11		
			12		
			13		
×	○	MID	A	14	
			B	15	
			C	16	
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	Ⅲ
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
		HYPER	W+1	37	
			W+2	38	
			W+3	39	
			W+4	40	
			W+5	41	
			W+6	42	
			W+7	43	
			W+8	44	
			W+9	45	
			W+10	46	
			W+11	47	
			W+12	48	
			W+13	49	
			W+14	50	
			W+15	51	
			W+16	52	
			W+17	53	
			W+18	54	
			W+19	55	
			W+20	56	
			W+21	57	
			W+22	58	
			W+23	59	
			W+24	60	
			W+25	61	
			W+26	62	
			W+27	63	
			W+28	64	
		ULTRA	W+29	65	
			W+30	66	Ⅳ
			W+31	67	
			W+32	68	
			W+33	69	
			W+34	70	

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
×	○	ULTRA	W+35	71	Ⅳ
			W+36	72	
			W+37	73	
			W+38	74	
			W+39	75	
			W+40	76	
			W+41	77	
			W+42	78	
			W+43	79	
			W+44	80	
			W+45	81	
			W+46	82	
			W+47	83	
			W+48	84	
			W+49	85	
			W+50	86	
			W+51	87	
			W+52	88	
			W+53	89	
			W+54	90	
			W+55	91	
			W+56	92	
			W+57	93	
			W+58	94	
			W+59	100	
			W+60	101	
			W+61	102	
			W+62	103	
			W+63	104	
			W+64	105	
			W+65	106	
			W+66	107	
			W+67	108	
			W+68	109	
			W+69	110	
			W+70	111	
			W+71	112	
			W+72	113	
			W+73	114	
			W+74	115	
			W+75	116	
			W+76	117	
			W+77	118	
			W+78	119	
			W+79	120	
			W+80	121	
			W+81	122	
			W+82	123	
			W+83	124	
			W+84	125	
		SUB MID	A-8	01	Ⅰ
			A-4	96	
			A-3	97	Ⅱ
			A-2	98	
			A-1	99	
○	×	UHF	14 ~ 69		Ⅳ

TOTAL 180CH
{ VHF 124CH
{ UHF 56CH

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VP0205
DP6060

JVC SERVICE & ENGINEERING COMPANY OF AMERICA

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West Coast	:	5665 Corporate Avenue, Cypress, California 90630	(714)229-8011
Southwest	:	10700 Hammerly, Suite 105, Houston,Texas 77043	(713)935-9331
Hawaii	:	2969 Mapunapuna Place, Honolulu, Hawaii 96819	(808)833-5828
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